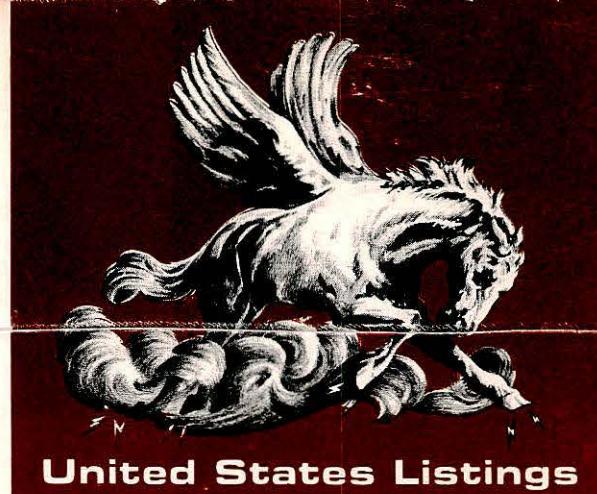


**FALL
1971**

(FOR SEPTEMBER, OCTOBER AND NOVEMBER)
Next Issue December 1, 1971



radio amateur
callbook
magazine



Photo courtesy Rhode Island Development Council

RHODE ISLAND

Even though it is the smallest of the 50 states, 1,058 square miles, Rhode Island holds a distinguished place in American history as the thirteenth of the original 13 states to ratify our Constitution.

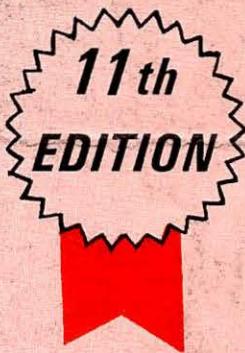
While highly industrialized, Rhode Island is also a favorite vacation area, offering such attractions as Mohegan Bluffs on Block Island. Shaped like a pork chop, Block Island sits 12 miles off the mainland in the Atlantic Ocean. A famous spot for record catches, Block Island is a fisherman's paradise—not only offering deep sea fishing but its numerous fresh water ponds offers a wide variety of fish for the sportsman. The Southeast Point Lighthouse, shown above, was first lighted in 1875 and is one of the strongest beacons and most important lights on the New England coast.

There are 1,501 licensed radio amateurs in "Little Rhody."

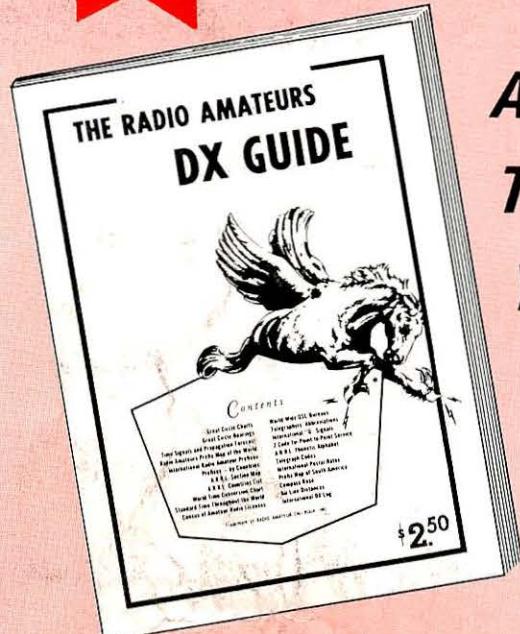
in this issue

- 287,655 U.S. licensed radio amateurs, including 5,536 new licenses issued by FCC since the Summer 1971 issue.
- Over 30,000 changes in listings.
- ZIP CODES and LICENSE CLASS on all listings.
- STOP PRESS—late QTH's.
- THEN & NOW—Call letter changes.
- SILENT KEYS deleted from this issue.
- QSL MANAGERS AROUND THE WORLD.
- Radio Amateur prefixes of the world, with map, A.R.R.L. countries list.
- Great circle bearings, postal information, standard time charts, codes, "Q" signals . . . and many other features.

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DXing Pleasure!**

The DX Guide is a handy reference manual containing valuable information for every radio amateur — especially the DXers.

JUST LOOK AT THIS TABLE OF CONTENTS

INTERNATIONAL DX LOG — prefixes of all countries that qualify for DXCC. Ample space provided to make a permanent record of all DX stations worked, showing date, call letters, frequency and whether a QSL card has been sent or received. Can be used either for a DX contest or the annual ARRL field day.

WORLD MAP SHOWING RADIO AMATEUR PREFIXES — an outstanding map, 15" x 10".

GREAT CIRCLE MAPS — centered on New York City, San Francisco, Seattle, Wash., Washington, D.C. and the center of the United States.

PREFIX MAP OF SOUTH AMERICA — showing the number or letter designating all sections and countries.

ARRL SECTION MAP — of the U.S. Check off the sections you have worked during ARRL contests.

GREAT CIRCLE BEARING TABLES — each printed on a separate page for easy removal of the one nearest your location, 326 bearings are shown to the nearest degree and the distance in statute miles on each table for Anchorage, Alaska; Atlanta, Georgia; Boston, Mass.; Buffalo, N.Y.; Chicago, Ill.; Columbus, Ohio; Dallas, Texas; Denver, Colo.; Detroit, Mich.; Honolulu, Hawaii; Houston, Texas; Jacksonville, Florida; Kansas City, Mo.; Knoxville, Tenn.; Los Angeles, Calif.; Louisville, Ky.; Miami, Fla.; Minneapolis, Minn.; New Orleans, La.; New York City, N.Y.; Norfolk, Va.; San Francisco, Calif.; Seattle, Wash.; Washington, D.C.; and the geographical center of the United States.

GREAT CIRCLE BEARINGS IN THE UNITED STATES — between 39 large cities in the U.S.A. — a valuable aid for VHF work as well as handling traffic through QRM.

GREAT CIRCLE BEARINGS TO WORLD WIDE METROPOLITAN AREAS — exact bearings to the nearest degree from 39 cities in the U.S.A. to 39 metropolitan areas throughout the world.

TIME CONVERSION TABLE — determine the time in any time zone in the world. Also know whether it is today or tomorrow at the place heard or worked.

TIME THROUGHOUT THE WORLD — time zones of most countries. Explains the International Time Zone System.

AIR LINE DISTANCES IN THE UNITED STATES — arranged in alphabetical order between 39 cities of the United States.

POSTAL INFORMATION — rates for QSL cards, first class and airmail letters to foreign countries. Also the number of international reply coupons for the proper postage for a return airmail letter is shown for most countries.

ARRL COUNTRIES LIST — official list of ARRL DX contest and DXCC. Courtesy ARRL.

COMPASS ROSE — for that rotary beam indicator, graduated for 360 degrees. With white background and no print on the reverse side of the sheet.

PLUS THESE INTERESTING FEATURES — INTERNATIONAL "Q" SIGNALS; WORLD WIDE QSL BUREAUS; "Z" CODE FOR POINT-TO-POINT SERVICE; ARRL PHONETIC ALPHABET; TELEGRAPHERS ABBREVIATIONS; DX OPERATING CODE; TELEGRAPH CODES.

NATIONAL BUREAU OF STANDARDS PROPAGATION FORECAST SERVICES AND TIME SIGNALS; CENSUS OF RADIO AMATEURS THROUGHOUT THE WORLD; RADIO AMATEUR PREFIXES ALPHABETICALLY BY PREFIX AND BY COUNTRY.

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RADIO AMATEURS OF THE U.S.A.

VOLUME 49
 NUMBER 3

ALL K AND W CALLS

FALL 1971

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RADIO AMATEUR CALLBOOK MAGAZINE is published quarterly on the first of March, June, September and December. Single copy, \$8.95 plus 25c for mailing in U.S.A., possessions and Canada, elsewhere add 50c for mailing. Subscription, any 4 issues, \$30.00 postpaid in U.S.A., possessions and Canada, \$31.00 postpaid elsewhere, throughout the world. Second class postage paid at Lake Bluff, Illinois.

HERBERT J. NELSON, Publisher and Advertising Manager.

VIRGINIA M. TWOREK, Editor.

CHARLES O. STIMPSON, WA4HIJ, Founder.

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The Home of RADIO AMATEUR CALLBOOK a modern air-conditioned building planned for maximum efficiency in the production of Callbooks and Callbook products.

A year around staff, through the use of electronic data processing equipment, evaluates and compiles the directory information received daily from all over the world. Extensive library and historical records are maintained to provide the most complete and accurate Callbook possible to produce.

The Callbook had its beginning back in 1920 when there were just a few radio amateurs. Today, Callbooks and Callbook products are in use in every country of the world.



CENSUS OF AMATEUR RADIO LICENSES OF THE WORLD*

Prefix	Country	Number of radio amateur licenses	Prefix	Country	Number of radio amateur licenses	Prefix	Country	Number of radio amateur licenses
A2	Botswana.....	18	K,W	United States of America (48 states)...	283,015	VR1	British Phoenix, Ellice, Gilbert & Ocean Is.	2
AC3	Sikkim.....	1	KA	U. S. Personnel in Japan.....	88	VR2	Fiji Is.....	18
AP	Pakistan.....	35	KB6	Baker, Canton, Enderbury, Howland & Phoenix Is.....	11	VR4	Solomon Is.....	10
BV	Taiwan (Formosa).....	1	KC4	Navassa Is.....	1	VR5	Tonga Is.....	1
CE	Chile.....	2,504	KC4AA, US	Antarctica.....	11	VS5	Brunei.....	7
CE9	South Shetland Is., Graham Land.....	26	KC6	Caroline Is.....	34	VU	Hong Kong.....	42
CE0A	Easter Is.....	11	KG4	Guantanamo Bay, Cuba.....	21		India.....	553
CE0Z	Juan Fernandez Is.....	11	KG6	Mariana Is.....	126			
CM, CO	Cuba.....	411	KH6	Hawaii.....	1,407	W,K	United States of America (See K,W).....	
CN	Morocco.....	137	KJ6	Johnston Is.....	7	XE,XF	Mexico.....	2,969
CP	Bolivia.....	474	KL7	Alaska.....	1,182		XE1 - 1,452	
CR3	Portuguese Guinea.....	3	KM6	Midway Is.....	11		XE2 - 1,381	
CR4	Cape Verde Is.....	30	KP4	Puerto Rico.....	893		XE3 - 136	
CR5	Sao Tome & Principe Is.....	1	KP6	Jarvis & Palmyra Is.....	8	XT2	Upper Volta.....	2
CR6	Angola.....	262	KR6, 8	Ryukyu Is. (Okinawa).....	359	XW8	Laos.....	31
CR7	Mozambique.....	214	KS4	Swan Is.....	5	XZ	Burma.....	30
CR8	Timor Is.....	2	KS6	American Samoa.....	54			
CR9	Macao.....	1	KV4	Virgin Is.....	101	YA	Afghanistan.....	16
CT1	Portugal.....	418	KW6	Wake Is.....	24	YB	Indonesia.....	69
CT2	Azores Is.....	17	KX6	Marshall Is.....	62	YK	Syria.....	9
CT3	Madeira Is.....	12	KZ5	Canal Zone.....	235	YN	Nicaragua.....	378
CX	Uruguay.....	3,139	LA, LF, LJ	Norway.....	2,964	YQ	Romania.....	1,223
C21	Republic of Nauru.....	2	LU	Argentina.....	18,085	YS	El Salvador.....	205
C31	Andorra.....	27	LX	Luxembourg.....	103	YU	Yugoslavia.....	2,029
			LZ	Bulgaria.....	586	YV	Venezuela.....	3,373
DA,B,C,F,J,K,L	West German Federal Republic.....	16,993				ZB2	Gibraltar.....	11
DM	East German Democratic Republic.....	2,745	M1	San Marino.....	4	ZC4	Cyprus.....	23
DU	Philippines.....	138	MP4	Bahrein & Das Is., Muscat & Oman, Qatar, Trucial States.....	324	ZD3	Gambia.....	7
EA	Spain.....	1,209	OA	Peru.....	1,269	ZD5	Swaziland.....	10
EA6	Baleairic Is.....	29	OD5	Lebanon.....	89	ZD7	Saint Helena.....	2
EA8	Canary Is.....	158	OE	Austria.....	1,459	ZD8	Ascension Is.....	15
EA9	Spanish Sahara, Ifni, Ceuta y Melilla.....	18	OH	Finland.....	2,346	ZD9	Tristan da Cunha & Gough Is.....	3
EI	Ireland.....	343	OH0	Aland Is.....	19	ZE	Rhodesia.....	180
EL, 5L	Liberia.....	131	OJ0, OH0M	Market Reef.....	1	ZF1	Cayman Is.....	23
EP	Iran.....	29	OK, OL	Czechoslovakia.....	2,381	ZK1	Cook Is.....	14
ET3	Ethiopia.....	15	ON	Belgium.....	1,368	ZK2	Niue Is.....	2
F	France.....	5,679	OX	Greenland.....	75	ZL	New Zealand.....	4,507
FB8	Amsterdam, St. Paul, Crozet, Kerguelen, Tromelin Is.....	4	OY	Faeroes Is.....	74	ZP	Paraguay.....	291
			OZ	Denmark.....	3,020	ZS	South Africa.....	2,804
						ZS3	South-West Africa.....	62
FG7	Guadeloupe Is.....	36						
FH8	Comoro.....	5	PA, PE, PI	Netherlands.....	2,285	3A	Monaco.....	21
FK8	New Caledonia.....	23	PJ	Netherlands Antilles - PJ2 - Curacao...	35	3B7	St. Brandon Is.....	1
FL8	French Somaliland.....	17		PJ3 - Aruba.....	27	3B8	Mauritius Is.....	34
FM7	Martinique.....	28		PJ4 - Bonaire.....	4	3B9	Rodrigues Is.....	1
FO8	French Polynesia.....	47		PJ6 - Saba Is....	1	3V8	Tunisia.....	2
FP8	St. Pierre & Miquelon Is.....	5		PJ7 - Sint Maarten	11	4S7	Ceylon.....	56
FR7	Reunion Is.....	30	PY	Brazil.....	12,073	4U	United Nations, Geneva.....	1
FS7	Saint Martin.....	1	PY0	Fernando de Noronha Is.....	3	4W1	Yemen.....	9
FU8, YJ	New Hebrides.....	15	PZ	Surinam.....	51	4X4, 4Z4	Israel.....	664
FW8	Wallis & Futuna Is.....	2						
FY7	French Guiana.....	22	SK, SL, SM	Sweden.....	4,291	5A	Libya.....	34
			SP	Poland.....	3,406	5H1	Zanzibar.....	1
G	England.....	18,596	ST	Sudan.....	1	5H3	Tanzania.....	15
GC	Channel Is.....	98	SU	Egypt.....	4	5N2	Nigeria.....	10
GD	Isle of Man.....	50	SV	Greece, Crete.....	202	5R8	Madagascar.....	13
GI	Northern Ireland.....	344	TF	Iceland.....	43	5T5	Mauritania.....	3
GM	Scotland.....	1,310	TG	Guatemala.....	201	SU7	Niger.....	10
GW	Wales.....	819	TI	Costa Rica.....	549	5V	Togo.....	12
HA, HG	Hungary.....	629	TI9	Cocos Is.....	2	5W1	Western Samoa.....	7
HB	Switzerland.....	979	TJ	Cameroon.....	18	5X5	Uganda.....	7
HB0	Liechtenstein.....	1	TL8	Central African Republic.....	4	5Z4	Kenya.....	53
HC	Ecuador.....	557	TN8	Republic of Congo (Brazzaville).....	8			
HC8	Galapagos Is.....	8	TR8	Gabon.....	13			
HH	Haiti.....	18	TT8	Chad.....	10			
HI	Dominican Republic.....	555	TU2	Ivory Coast.....	38			
HK	Colombia.....	1,805	TY	Dahomey.....	3			
HK0	Bajo Nuevo Is.....	1	VE	Canada.....	12,317	7G1	Republic of Guinea.....	1
HK0	Malpelo Is.....	1		VE1 - 1,187	7P8, ZS8	7Q7	Lesotho.....	14
HK0	San Andres & Providencia Is.....	16		VE2 - 2,212		7X	Malawi.....	14
HM, HL	Korea.....	123		VE3 - 4,772		7Z, HZ	Algeria.....	36
HP	Panama.....	191		VE4 - 525			Saudi Arabia.....	1
HR	Honduras.....	176		VE5 - 543				
HS	Thailand.....	65		VE6 - 1,102				
HV	Vatican City.....	2		VE7 - 1,879				
HZ	Saudi Arabia.....	3		VE8 - 68				
				VE0 - 29				
I	Italy.....	4,768				9G1	Ghana.....	38
IC	Capri Is.....	1	VK	Australia.....	6,402	9H1	Malta.....	54
IH	Pantelleria Is.....	2	VO1	Newfoundland.....	242	9I, 9J	Zambia.....	63
IS	Sardinia.....	77	VO2	Labrador.....	36	9K2	Kuwait.....	59
IT	Sicily.....	245	VP1	British Honduras.....	45	9L	Sierra Leone.....	2
JA, JH, JR	Japan.....	13,328	VP2	Leeward-Windward Is.....	169	9M2	Federation of Malaysia.....	89
JD1	Minami-Tori-Shima Is.....	10	VP5	Turks & Caicos Is.....	6	9M6	Sabah.....	3
JT1	Mongolia.....	4	VP7	Bahama Is.....	55	9M8	Sarawak.....	7
JW	Svalbard Is.....	19	VP8	Falkland, South Georgia, South Orkney, South Sandwich, South Shetland Is.....	40	9N1	Nepal.....	1
JX	Jan Mayen Is.....	22	VP9	Bermuda Is.....	59	9Q5	Republic of the Congo (Kinshasa).....	233
			VQ9	Seychelles Is.....	10	9U5	Burundi.....	9
						9V1	Republic of Singapore.....	58
						9X5	Rwanda.....	48
						9Y4	Trinidad & Tobago Is.....	88

* From the Fall 1971 Radio Amateur Callbook Magazines.
 Absence of prefix and country indicates either that no licenses have been issued or have not been obtainable from official sources.

PREFIXES-BY COUNTRIES

The following countries listed in alphabetical order by country show international radio amateur prefixes. Characters in () designate the continent and zone in which the country is located. Abbreviations are as follows: A—Asia, AF—Africa, E—Europe, NA—North America, O—Oceania, SA—South America.

Afghanistan.....	(A-21).....YA	Haiti.....(NA-8).....HH	Qatar.....(A-21).....MP4Q
Agalega Is.....	(AF-39)....3B6, VQ8	Hawaii.....(O-31).....KH6	Reunion Is.....(AF-39).....FR7
Aland Is.....	(E-15).....OH0	Heard Is.....(O-39).....VK9	Revillagigedo Is.....(NA-6).....XE4
Alaska.....	(NA-1).....KL7	Honduras.....(NA-7).....HR	Rhodesia.....(AF-38).....ZE
Albania.....	(E-15).....ZA	Hong Kong.....(A-24).....VS6	Rodriguez Is.....(AF-39)....3B9, VQ8
Algeria.....	(AF-33)....7X, FA	Howland Is.....(O-31).....KB6	Romania.....(E-20).....Y0
Amsterdam & St. Paul Is.....	(AF-39)....FB8Z	Hungary.....(E-15).....HA, HG	Rwanda.....(AF-36).....9X5
Andaman & Nicobar Is....	(A-26).....VU2	Iceland.....(E-40).....TF	Ryukyu Is. (Okinawa).....(A-25).....KR6, 8
Andorra.....	(E-14).....C31, PX	Ifni.....(AF-33).....EA9	Sabah.....(O-28).....9M6
Angola.....	(AF-36).....CR6	India.....(A-22).....VU2	St. Brandon Is.....(AF-39)....3B7, VQ8
Antarctica.....	CE9AA-AM, FB8Y, KC4	Indonesia.....(O-28)....YB, 8F, PK	Saint Helena Is.....(AF-36).....ZD7
LA, LU-Z, OR, UA1, VK0, VP8, ZL5, 3Y, 8J		Iran.....(A-21).....EP	Saint Martin Is.....(NA-8).....FS7
Argentina.....	(SA-13).....LU	Iraq.....(A-21).....YI	St. Peter & St. Paul's Rocks (SA-11).....PY0
Ascension Is.....	(AF-36).....ZD8	Ireland.....(E-14).....EI	Saint Pierre & Miquelon Is. (NA-5).....FP8
Auckland & Campbell Is.....	(O-32).....ZL	Isle of Man.....(E-14).....GD	Samoa, American.....(O-32).....KS6
Australia.....	(O-29 & 30)....VK, AX	Israel.....(A-20)....4X4, 4Z4	Samoa, Western.....(O-32)....5W1, ZM6
Austria.....	(E-15).....OE	Italy.....(E-15).....I, IR0	San Andres & Providencia, (NA-7).....HK0
Aves Is.....	(SA-9).....YV0	Ivory Coast.....(AF-35)....TU2, FF4	San Felix Is.....(SA-12).....CE0X
Azores Is.....	(E-14).....CT2	Jamaica.....(NA-8)....6Y5, VP5	San Marino.....(E-15).....M1, 9A1
Bahama Is.....	(NA-8).....VP7	Jan Mayen Is.....(E-40)....JX, LA/P	Sao Tome & Principe Is. (A-36).....CR5
Bahrain Is.....	(A-21).....MP4B	Japan.....(A-25)....JA, JH, JR	Sarawak.....(O-28).....9M8
Bajo Nuevo Is.....	(NA-7).....HK0	Jarvis Is.....(O-31).....KP6	Sardinia.....(E-15).....IS
Baker Is.....	(O-31).....KB6	Jersey Is.....(E-14).....GC	Saudi Arabia.....(A-21).....HZ, 7Z
Balearic Is.....	(E-14).....EA6	Johnston Is.....(O-31).....KJ6	Saudi Arabia/Iraq Neutral Zone.....(A-21).....8Z4
Barbados Is.....	(NA-8)....8P6, VP6	Jordan.....(A-20).....JY	Scotland.....(E-14).....GM
Belgium.....	(E-14).....ON	Juan de Nova Is.....(AF-39).....FR7	Senegal Republic.....(AF-35)....6W8, FF8
Bermuda Is.....	(NA-5).....VP9	Juan Fernandez Is.....(SA-12)....CE0Z	Serrana Blk & Roncador Cay (NA-7)....KS4B, HK0
Butan.....	(A-22)....AC5	Kamaran Is.....(A-21)....VS9K	Seychelles Is.....(AF-39).....VQ9
Bolivia.....	(SA-10).....CP	Kenya.....(AF-37)....5Z4, VQ4	Sicily.....(E-15).....IT
Bonin Is (Ogasawara Is)....(A-27).....KG6I		Kerguelen Is.....(AF-39)....FB8X	Sierra Leone.....(AF-35)....9L1, ZD1
Botswana.....	(AF-38)....A2C, ZS9	Kermadec Is.....(O-32).....ZL	Sikkim.....(A-22).....AC3
Brazil.....	(SA-11).....PY	Korea.....(A-25)....HM, HL9	Singapore.....(A-28)....9V1, VS1, 9M4
British Honduras.....	(NA-7).....VP1	Kure Is.....(O-31).....KH6	Solomon Is.....(O-28).....VR4
British Phoenix Is.....	(O-31).....VR1	Kuwait.....(A-21).....9K2	Somali Republic.....(AF-37)....601, 2, 6
Brunei.....	(O-28).....VS5	Kuwait/Saudi Arabia Neutral Zone.....(A-21)....9K3, 8Z5	Somaliland, French.....(AF-37)....FL8
Bulgaria.....	(E-20).....LZ	Labrador.....(NA-2).....V02	South Africa.....(AF-38)....S1, 2, 4-6
Burma.....	(A-26).....XZ2	Laccadive Is.....(A-22).....VU4	South Georgia Is.....(SA-13)....VP8, LU-Z
Burundi.....	(AF-36)....9U5	Laos.....(A-26).....XW8	South Orkney Is.....(SA-13)....VP8, LU-Z
Cambodia.....	(A-26).....XU	Lebanon.....(A-20).....OD5	South Sandwich Is.....(SA-13)....VP8, LU-Z
Cameroon.....	(AF-36)....TJ, FE8	Leeward Is.	S. Shetland Is. (SA-13)....CE9AN-AZ, VP8, LU-Z
Canada.....	(NA-1 to 5)....VE	Anguilla.....(NA-8)....VP2E	Southwest Africa.....(AF-38).....ZS3
Canal Zone.....	(NA-7).....KZ5	Antigua, Barbuda.....(NA-8)....VP2A	South Yemen.....(A-21)....VS9A, P, S, 7O
Canary Is.....	(AF-33)....EA8	British Virgin Is.....(NA-8)....VP2V	Soviet Union
Cantao Is.....	(O-31).....KB6	Montserrat.....(NA-8)....VP2M	European Russian Soviet Federated Socialist Republic.....(E-16)....UA, UK, UV
Cape Verde Is.....	(AF-35)....CR4	St. Kitts, Nevis.....(NA-8)....VP2K	Franz Josef Land.....(NA-40).....UA1
Caroline Is.....	(O-27).....KC6	Lesotho.....(AF-38)....7P8, ZS8	Kaliningradsk.....(E-15).....UA2
Cayman Is.....	(NA-8)....ZF1, VP5	Liberia.....(AF-35)....EL, 5L	Asiatic Russian S.F.S.R. (A-18, 19)....U9A, 0
Central African Republic.....(AF-36)....TL8, FQ8		Libya.....(AF-34)....5A	Ukrainian S.S.R.(E-16).....UB5
Ceuta y Melilla, Spanish (A-33)....EA9		Liechtenstein.....(E-14)....HB0, HE	White Russian S.S.R.(E-16).....UC2
Ceylon.....	(A-22)....457	Lord Howe Is.....(O-30)....VK2	Azerbaijan S.S.R.(A-21).....UD6
Chad Republic.....	(AF-36)....TT8, FQ8	Luxembourg.....(E-14)....LX	Georgian S.S.R.(A-21).....UF6
Chagos Is.....	(AF-39)....VQ9	Macao.....(A-24)....CR9	Armenian S.S.R.(A-21).....UG6
Chatham Is.....	(O-32).....ZL	Macquarie Is.....(O-30)....VK0	Turkmen S.S.R.(A-17).....UH8
Chile.....	(SA-12)....CE	Madeira Is.....(AF-33)....CT3	Uzbek S.S.R.(A-17).....U18
China.....	(A-23 & 24)....BY	Malagasy Republic.....(AF-39)....5R8, 5B8	Tadzhik S.S.R.(A-17).....UJ8
Christmas Is.....	(O-29)....VK9X	Malawi.....(AF-37)....7Q7, ZD6	Kazakh S.S.R.(A-17).....UL7
Clipperton Is.....	(NA-7)....F08	Malaysia, East.....(A-28)....9M6, 8, VS4	Kirghiz S.S.R.(A-17).....UM8
Cocos Is.....	(NA-7)....T19	Malaysia, West.....(A-28)....9M2, 4, VS1	Moldavian S.S.R.(E-16).....U05
Cocos (Keeling) Is.....	(O-29)....VK9Y	Maldives Is.....(A-22)....8QA, VS9M	Lithuanian S.S.R.(E-15).....UP2
Colombia.....	(SA-9).....HK	Mali Republic.....(AF-35)....TZ, FF8	Latvian S.S.R.(E-15).....UQ2
Comoro Is.....	(AF-39)....FH8, FB8	Malpelo Is.....(SA-9)....HK0	Estonian S.S.R.(E-15).....UR2
Congo, Republic of.....(AF-36)....TN8, FQ8		Malta.....(E-15)....9H1, ZB1	Spain.....(E-14)....EA
Congo, Republic of the....(AF-36)....9Q5, QQ5, 0		Manihiki Is.....(O-32)....ZK1	Spanish Sahara (Rio de Oro) (A-33)....EA9
Cook Is.....	(O-32)....ZK1	Marcus Is.	Sudan.....(AF-34)....ST
Corsica.....	(E-15)....FC	(Minami-Tori-Shima Is) (A-27)....KG6I	Surinam.....(SA-9)....PZ
Costa Rica.....	(NA-7)....TI	Mariana Is. (Saipan)....(O-27)....KG6R, S, T	Svalbard Is.....(E-40)....JW, LA/P
Crete.....	(E-20)....SV	Marshall Is.....(O-31)....KX6	Swan Is.....(SA-7)....KS4
Crozet Is.....	(AF-39)....FB8W	Martinique.....(NA-8)....FM7	Swaziland.....(AF-38)....ZD5, ZS7
Cuba.....	(NA-8)....CM, CO	Mauritania.....(AF-35)....5T5, FF7	Sweden.....(E-14)....SK, SL, SM
Cyprus.....	(A-20)....ZC4, 5B4	Mauritius Is.....(AF-39)....3B8, VQ8	Switzerland.....(E-14)....HB
Czechoslovakia.....	(E-15)....OK, OL	Mexico.....(NA-6)....XE, XF, 4A	Syria.....(A-20)....YK
Dahomey.....	(AF-35)....TY, FF8	Midway Is.....(O-31)....KM6	Taiwan (Formosa).....(A-24)....BV
Das Is.....	(A-21)....MP4D	Minami-Tori-Shima Is.....(A-27)....JD1	Tanganyika.....(AF-37)....5H3, VQ3
Denmark.....	(E-14)....OZ	Monaco.....(E-14)....3A	Tasmania.....(O-30)....VK7
Dodecanese Is.....	(E-20)....SV5	Mongolia.....(AF-33)....CN2, 8, 9	Thailand.....(A-26)....HS
Dominican Republic.....	(NA-8)....HI	Mozambique.....(AF-37)....CR7	Tibet.....(A-23)....AC4
Easter Is.....	(SA-12)....CE0A	Muscat & Oman.....(A-21)....MP4M	Timor Is. (Portuguese)....(O-28)....CR8
Ecuador.....	(SA-10)....HC	Nauru, Republic of.....(O-31)....C21, VK9	Togo.....(AF-35)....5V, FD
Egypt.....	(AF-34)....SU	Navassa Is.....(NA-8)....KC4	Tokelau Is.....(O-31)....ZM7
El Salvador.....	(NA-7)....YS	Nepal.....(A-22)....9N1	Tonga (Friendly) Is.....(O-32)....VR5
Enderbury Is.....	(O-31)....KB6	Netherlands.....(E-14)....PA, PE, PI	Trindade & Martin Vaz Is. (SA-11)....PY0
England.....	(E-14)....G	Netherlands Antilles.....(SA-9)....PJ	Trinidad & Tobago Is.....(SA-9)....9Y4, VP4
Ethiopia.....	(AF-37)....ET3	New Caledonia.....(O-32)....FK8	Tristan de Cunha & Gough (AF-38)....ZD9
Faeroes Is.....	(E-14)....OY	Newfoundland.....(NA-5)....V01	Tromelin Is.....(AF-39)....FR7, FF8
Falkland Is.....	(SA-13)....VP8	New Guinea Territory.....(O-28)....VK9AA-MZ	Trucial States.....(A-21)....MP4T
Fanning & Christmas Is....(O-31)....VR3		New Hebrides.....(O-32)....FUB, YJ	Tunisia.....(AF-33)....3V8
Fernando de Noronha....	(SA-11)....PY0	New Zealand.....(O-32)....ZL, ZM	Turkey.....(A-20)....TA, TC
Fiji Is.....	(O-32)....VR2	Nicaragua.....(NA-7)....YN, HT	Turks & Caicos Is.....(NA-8)....VP5
Finland.....	(E-15)....OH	Niger.....(AF-35)....5U7, FF8	Uganda.....(AF-37)....5X5, VQ5
France.....	(E-14)....F	Nigeria.....(AF-35)....5N2, ZD2	United Nations, Geneva.....(E-14)....4U
French Polynesia.....	(O-32)....F08	Niue Is.....(O-32)....ZK2	United States of America....(NA-3, 4, 5)....W, K
Gabon Republic.....	(AF-36)....TR8, FQ8	Norfolk Is.....(O-32)....VK9N	Upper Volta.....(AF-35)....XT2, FF8
Galapagos Is.....	(SA-10)....HC8	Northern Ireland.....(E-14)....GI	Uruguay.....(SA-13)....CX
Gambia.....	(AF-35)....ZD3	Norway.....(E-14)....LA, LF, LJ	Vatican City.....(E-15)....HV
German Federal Rep, West.....(E-14)....DA, B, C, JK, L		Ogasawara Is. (Bonin Is.)....(A-27)....JD	Venezuela.....(SA-9)....YV
German Dem. Rep, East.....(E-14)....DM		Pakistan.....(A-21, 22)....AP	Vietnam.....(A-26)....3W8, XV5
Ghana.....	(AF-35)....9G1, ZD4	Palmyra Is.....(O-31)....KP6	Virgin Is.....(NA-8)....KV4
Gibraltar.....	(E-14)....ZB2	Panama.....(NA-7)....HP	Wake Is.....(O-31)....KW6
Gilbert, Ellice & Ocean Is. (O-31)....VR1		Papua Territory.....(O-28)....VK9AA-MZ	Wales.....(E-14)....GW
Glorioso Is.....	(AF-39)....FR7	Paraguay.....(SA-11)....ZP	Wallis & Futuna Is.....(O-32)....FW8
Greece.....	(E-20)....SV, SZ0	Peru.....(SA-10)....OA	Willis Is.....(O-30)....VK4
Greenland.....	(NA-40)....OX, XP	Philippines.....(O-27)....DU	Windward Is.
Guadeloupe Is.....	(NA-8)....FG7	Phoenix Is.....(O-31)....KB6	Dominica.....(NA-8)....VP2D
Guam Is.....	(O-27)....KG6	Pitcairn Is.....(O-32)....VR6	Grenada & Dependencies....(NA-8)....VP2G
Guantanamo Bay.....	(NA-8)....KG4	Poland.....(O-31)....SP, 3Z	St. Lucia.....(NA-8)....VP2L
Guatemala.....	(NA-7)....TG	Portugal.....(E-14)....CT1	St. Vincent & Dependencies (NA-8)....VP2S
Guernsey & Dependencies.....(E-14)....GC		Prince Edward & Marion Is. (AF-38)....ZS2	
Guiana, French.....	(SA-9)....FY7	Prince & Sao Tome Is....(A-36)....CR5	
Guinea, Equatorial.....(AF-36)....3C, EA0		Puerto Rico.....(NA-8)....KP4	
Guinea, Portuguese.....(AF-35)....CR3			
Guinea, Republic of.....(AF-35)....7G1, 3X			
Guyana.....	(SA-9)....8R, VP3		

TELEGRAPH CODES

CONTINENTAL CODE	MORSE CODE
Used in ham radio	Used on land lines in United States and Canada
A	• —
B	— • •
C	— • — •
D	— • •
E	•
F	• • — •
G	— — •
H	• • •
I	• •
J	• — — —
K	— — • —
L	— — • •
M	— —
N	— — •
O	— — —
P	— — — •
Q	— — — —
R	— — •
S	• • •
T	—
U	• — —
V	• — — —
W	— — —
X	— — — —
Y	— — — — —
Z	— — — — —
There are no space letters in the Continental Code	
Figures	
1	— — — —
2	— — — — —
3	— — — — — —
4	— — — — — — —
5	— — — — — — — —
6	— — — — — — — — —
7	— — — — — — — — — —
8	— — — — — — — — — — —
9	— — — — — — — — — — — —
0	— — — — — — — — — — — — —
Punctuation	
(.)	• — — — —
(,)	— — — — —
(?)	— — — — — —
(:)	— — — — — — —
(;)	— — — — — — — —
(-)	— — — — — — — — —
(!) None at present	— — — — — — — — — — —
(")	— — — — — — — — — — — —
(/)	— — — — — — — — — — — — —
(()	— — — — — — — — — — — — —
(")	— — — — — — — — — — — — — —

EMERGENCY SIGNAL

QRRR (The land SOS) To be used only by a station in the affected area when calling with an emergency message.

Build **RELIABILITY**
into your equipment
with **SPRAGUE**

'LYTIC CAPACITORS

Twist-Lok®
Electrolytics



Hermetically sealed in aluminum cases. Withstand high temperatures (85°C), high surge voltages, high ripple currents.



Atom® Electrolytics

Tiny, dependable single or multiple section units. Low leakage, long shelf life. Metal cases.

Litt-Lytic® Electrolytics

Ultra-small, excellent for transistorized circuitry. All-welded construction—no pressure joints to cause "opens". Long shelf life.

HYPASS® CAPACITORS



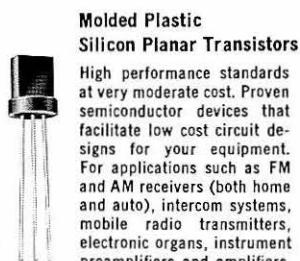
Exclusive 3-terminal feed-thru units which effectively by-pass vhf currents. Suppress TVI from transmitters, diathermy, line-conducted radiation, etc.

OIL CAPACITORS



Rectangular Oils
For transmitter power supplies and other high voltage applications. Hermetically sealed in rugged metal cases. Oil-impregnated, oil-filled. High insulation resistance.

ECONOLINE® TRANSISTORS



Molded Plastic
Silicon Planar Transistors

High performance standards at very moderate cost. Proven semiconductor devices that facilitate low cost circuit designs for your equipment. For applications such as FM and AM receivers (both home and auto), intercom systems, mobile radio transmitters, electronic organs, instrument preamplifiers and amplifiers.

DIFILM® CAPACITORS

SPRAGUE DIFILM CAPACITOR



Black Beauty® Molded Tubulars
Dual dielectric (polyester film and paper) combines best features of both. Solid impregnated, nothing to leak or drip. Molded phenolic case. Withstand high temperatures, high humidity.



Orange Drop® Dipped Tubulars

Dual dielectric (polyester film and paper), with solid impregnated. Double-dipped in epoxy resin. Radial leads, ideal for printed wiring boards.

CERAMIC CAPACITORS

SPRAGUE CERAMIC CAPACITOR



Cera-Mite® Disc Types

Extremely wide range of capacitance values and voltage ratings. Available in general application, high-K, temperature-stable, and temperature-compensating types.

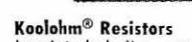


Buttonhead Types

Flat disc capacitor element sealed in top of hex head. Screw stud for easy mounting. Low self-inductance, high self-resonant frequency. Ideal for by-pass or feed-thru applications.

WIREWOUND RESISTORS

SPRAGUE WIREWOUND RESISTOR



Koolohm® Resistors

Insulated shell power resistors wound with ceramic-insulated wire. Completely moisture-proof. Ratings to 120 watts in inductive and non-inductive types.



Blue Jacket® Resistors

Vitreous enamel coating guards against humidity and failure from electrolysis. Ratings from 2 to 10 watts.

For complete data on these and other Sprague components, get Catalog C-619 from your Sprague Distributor, or write Sprague Products Co., 95 Marshall Street, North Adams, Mass. 01247

65-102-03-R10

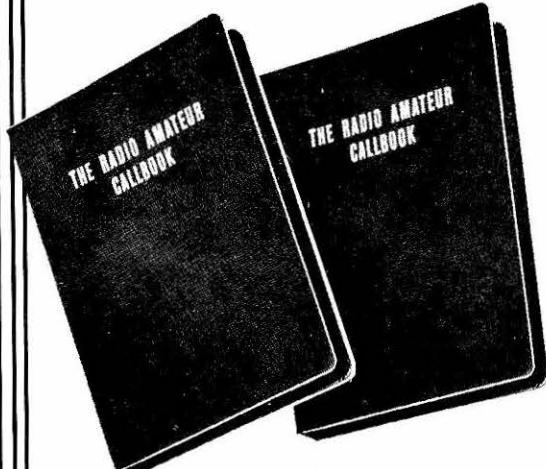
SPRAGUE

THE MARK OF RELIABILITY

INTERNATIONAL RADIO AMATEUR PREFIXES

The following prefixes are listed in alphabetical order for convenience in locating the country when DX calls are heard.

A2C.....	Botswana	KH6.....	Hawaii & Kure Is.	VR4.....	Solomon Is.
AC3.....	Sikkim	KJ6.....	Johnston Is.	VR5.....	Tonga Is.
AC4.....	Tibet	KL7.....	Alaska	VR6.....	Pitcairn Is.
AC5.....	Bhutan	KM6.....	Midway Is.	VS5.....	Brunei
AP.....	Pakistan	KP4.....	Puerto Rico	VS6.....	Hong Kong
AX.....	Australia	KP6.....	Jarvis & Palmyra Is.	VS9A, P, S.....	South Yemen
BV.....	Taiwan	KR6, KRB.....	Ryukyu Is. (Okinawa)	VS9K.....	Kamaran Is.
BY.....	China	KS4.....	Swan Is.	VU2.....	India
CE.....	Chile	KS4B.....	Serrana Bank & Roncador Cay	VU2.....	Laccadive Is.
CE9AN-AZ.....	South Shetland Is.	KS6.....	American Samoa	VU2.....	Andaman & Nicobar Is.
CEØA.....	Easter Is.	KV4.....	Virgin Is.	W.....	United States of America
CEØX.....	San Felix Is.	KW6.....	Wake Is.	XE, XF.....	Mexico
CEØZ.....	Juan Fernandez Is.	KX6.....	Marshall Is.	XE4.....	Revillagigedo Is.
CM, CO.....	Cuba	KZ5.....	Canal Zone	XT2.....	Upper Volta
CN.....	Morocco	LA, LF, LJ.....	Norway	XU.....	Cambodia
CP.....	Bolivia	LU.....	Argentina	XW8.....	Laos
CR3.....	Portuguese Guinea	LX.....	Luxembourg	XZ2.....	Burma
CR4.....	Cape Verde Is.	LZ.....	Bulgaria	YA.....	Afghanistan
CR5.....	Sao Tome & Principe Is.	M1.....	San Marino	YB, YC, YD.....	Indonesia
CR6.....	Angola	MP4.....	Bahrain and Das Is., Muscat & Oman, Qatar, Trucial States	YI.....	Iraq
CR7.....	Mozambique	OA.....	Peru	YJ.....	New Hebrides
CR8.....	Goa	OD5.....	Lebanon	YK.....	Syria
CR9.....	Timor Is. (Portuguese)	OE.....	Austria	YN.....	Nicaragua
CT1.....	Macao	OH.....	Finland	YO.....	Romania
CT2.....	Portugal	OH0.....	Aland Is.	YS.....	El Salvador
CT3.....	Azores Is.	OJØ, OHØM.....	Market Reef	YU, YT.....	Yugoslavia
CX.....	Madeira Is.	OK, OL.....	Czechoslovakia	YV.....	Venezuela
C21.....	Uruguay	ON.....	Belgium	YVØ.....	Aves Is.
C31.....	Republic of Nauru	OX.....	Greenland	ZA.....	Albania
DA, B, C, F, J, K, L, ..	West German Federal Rep.	OY.....	Faeroes Is.	ZB2.....	Gibraltar
DM.....	East German Democratic Rep.	OZ.....	Denmark	ZC4.....	Cyprus
DU.....	Philippines	PA, PE, PI.....	Netherlands	ZD3.....	Gambia
EA.....	Spain	PJ.....	Netherlands Antilles	ZD5, ZS7.....	Swaziland
EA6.....	Balearic Is.	PJ2.....	Curacao	ZD7.....	Saint Helena
EA8.....	Canary Is.	PJ3, 9.....	Aruba	ZD8.....	Ascension Is.
EA9.....	Spanish Sahara, Ilini, Ceuta y Melilla	PJ4, 9.....	Bonaire	ZD9.....	Tristan da Cunha & Gough Is.
EI.....	Ireland	PJ5.....	St. Eustatius	ZE.....	Rhodesia
EL, SL.....	Liberia	PJ6.....	Saba Is.	ZF1, VP5.....	Cayman Is.
EP.....	Iran	PJ7.....	Sint Maarten	ZK1.....	Cook & Maniniki Is.
ET3.....	Ethiopia	PY.....	Brazil	ZK2.....	Niue Is.
F.....	France	PYØ.....	Fernando de Noronha Is.	ZL, ZM.....	New Zealand & Auckland, Campbell, Chatham, Kermadec Is.
FB8.....	Austral and Antarctic French Lands, Amsterdam, St. Paul, Crozet, Kerguelen Is.	PYØ.....	St. Peter & St. Paul's Rocks	ZM7.....	Tokelau Is.
FC.....	Corsica	PYØ.....	Trindade & Martin Vaz Is.	ZP.....	Paraguay
FG7.....	Guadeloupe Is.	PZ.....	Surinam	ZS1, 2, 4, 5, 6.....	South Africa
FH8.....	Comoro Is.	SK, SL, SM.....	Sweden	ZS2.....	Prince Edward & Marion Is.
FK8.....	New Caledonia	SP.....	Poland	ZS3.....	Southwest Africa (Namibia)
FL8.....	French Somaliland (Afars and Issas)	ST.....	Sudan	3A.....	Monaco
FM7.....	Martinique	SU.....	Egypt (United Arab Republic)	3B6.....	Agalega Is.
FO8.....	French Polynesia, Clipperton Is.	SV, SZ9.....	Crete, Greece	3B7.....	St. Brandon Is.
FP8.....	St. Pierre & Miquelon Is.	SV5.....	Dodecanese Is.	3B8.....	Mauritius Is.
FR7.....	Glorioso, Juan de Nova, Reunion, Tromelin Is.	TA, TC.....	Turkey	3B9.....	Rodriguez Is.
FS7.....	Saint Martin	TF.....	Iceland	3C.....	Equatorial Guinea
FU8.....	New Hebrides	TG.....	Guatemala	3V8.....	Tunisia
FW8.....	Wallis & Futuna Is.	TI.....	Costa Rica	3W8.....	Vietnam
FY7.....	French Guiana	T19.....	Cocos Is.	3Y.....	Bouvet Is.
G.....	England	TJ.....	Cameroon	3Z.....	Poland
GC.....	Channel Is.	TL8.....	Central African Republic	4S7.....	Ceylon
GD.....	Isle of Man	TN8.....	Republic of Congo (Brazzaville)	4U.....	United Nations, Geneva, Turin
GI.....	Northern Ireland	TR8.....	Gabon	4W1.....	Yemen
GM.....	Scotland	TT8.....	Chad	4X4, 4Z4.....	Israel
GW.....	Wales	TU2.....	Ivory Coast	5A.....	Libya
HA, HG.....	Hungary	TY.....	Dahomey	5B4.....	Cyprus
HB.....	Switzerland	TZ.....	Mali Republic	5H1.....	Zanzibar
HBØ.....	Liechtenstein	UA1, 3, 4, 6.....	European Russian	5H3.....	Tanganyika (Tanzania)
HC.....	Ecuador	Soviet Federated Socialist Republic	Asiatic Russian S.F.S.R.	5N2.....	Nigeria
HC8.....	Galapagos Is.	UB5.....	Ukrainian S.S.R.	5R8.....	Madagascar (Malagasy Republic)
HH.....	Haiti	UC2.....	White Russian S.S.R.	5T5.....	Mauritania
HI.....	Dominican Republic	UD6.....	Azerbaijan S.S.R.	5U7.....	Niger
HK.....	Colombia	UF6.....	Georgian S.S.R.	5V.....	Togo
HKØ.....	Bajo Nuevo, Malpelo, San Andres & Providencia Is.	UG6.....	Armenian S.S.R.	5W1.....	Western Samoa
HM, HL9.....	Korea	UH8.....	Turkmen S.S.R.	5X5.....	Uganda
HP.....	Panama	UJ8.....	Uzbek S.S.R.	5Z4.....	Kenya
HR.....	Honduras	UL7.....	Tadzhik S.S.R.	601, 2, 6.....	Somali Republic
HS.....	Thailand	UM8.....	Kazakh S.S.R.	6W8.....	Senegal
HT.....	Nicaragua	UN1.....	Kirghiz S.S.R.	6Y5.....	Jamaica
HV.....	Vatican City	UO5.....	Moldavian S.S.R.	7G1.....	Republic of Guinea
HZ, 7Z.....	Saudi Arabia	UP.....	Lithuanian S.S.R.	70.....	South Yemen
I, IRØ.....	Italy	UQ.....	Latvian S.S.R.	7P8.....	Lesotho
IC.....	Capri Is.	UR.....	Estonian S.S.R.	7Q7.....	Malawi
IH.....	Pantelleria Is.	VE.....	Canada	7X.....	Algeria
IS.....	Sardinia	VK.....	Australia	7Z.....	Saudi Arabia
IT.....	Sicily	VK2.....	Lord Howe Is.	8P6.....	Barbados Is.
JA, JH, JR.....	Japan	VK4.....	Willis Is.	8QA.....	Maldives Is.
JD.....	Ogasawara, Minami-Tori-Shima Is.	VK7.....	Tasmania	8R.....	Guyana
JT1.....	Mongolia	VK9.....	New Guinea, Papua, Christmas, Cocos-Keeling, Norfolk Is.	8Z4.....	Saudi Arabia/Iraq Neutral Zone
JW.....	Svalbard Is.	VKØ.....	Heard & Macquarie Is., Antarctica	9G1.....	Ghana
JX.....	Jan Mayen Is.	VO1.....	Newfoundland	9H1.....	Malta
JY.....	Jordan	VO2.....	Labrador	9I, 9J.....	Zambia
K.....	United States of America	VP1.....	British Honduras	9K2.....	Kuwait
KA.....	U.S. Personnel in Japan	VP2.....	Leeward & Windward Is.	9K3, 8Z5.....	Kuwait/Saudi Arabia Neutral Zone
KB6.....	Baker, Canton, Enderbury, Howland & Phoenix Is.	VP5.....	Turks & Caicos Is.	9L1.....	Sierra Leone
KC4.....	Navassa Is.	VP7.....	Bahama Is.	9M2.....	Federation of Malaysia
KC4AA, KC4US.....	Antarctica	VP8.....	Falkland, S. Georgia, S. Orkney, S. Sandwich, S. Shetland Is., Graham Land	9M6.....	Sabah
KC6.....	Caroline Is.	VP9.....	Bermuda Is.	9M8.....	Sarawak
KG4.....	Guantanamo Bay, Cuba	VQ1.....	Zanzibar	9N1.....	Nepal
KG6.....	Guam	VQ9.....	Chagos & Seychelles Is.	9Q5.....	Republic of the Congo (Kinshasa)
KG6R, S, T.....	Mariana Is.	VR1.....	Br. Phoenix, Elllice, Gilbert & Ocean Is.	9U5.....	Burundi
KG6I.....	Marcus, Volcano & Bonin Is.	VR2.....	Fiji Is.	9V1.....	Republic of Singapore
		VR3.....	Fanning & Christmas Is.	9X5.....	Rwanda
				9Y4.....	Trinidad & Tobago Is.

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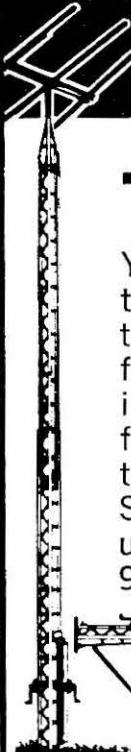
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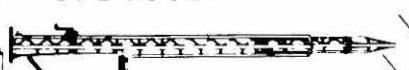
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A. R. R. L. COUNTRIES LIST

The ARRL Postwar Countries List is the official standard used in connection with the DX Century Club. To qualify for the DX Century Club Award, an applicant must submit confirmations from at least 100 different countries contacted after November 15, 1945, in accordance with the Postwar DXCC Rules. Copies of the DXCC Rules will be furnished by ARRL on request.

AC3	Sikkim	KJ6	Johnston Island	VQ9	Chagos Islands
AC4	Tibet	KL7	Alaska	VQ9	Desroches
AC	Bhutan	KM6	Midway Islands	VQ9	Farquhar
AP	East Pakistan	KP4	Puerto Rico	VQ9	Seychelles
AP	West Pakistan	KP6	Palmyra Group, Jarvis Is.	VR1	British Phoenix Islands
BV	Formosa	KR6, 8	Ryukyu Islands	VR1	Gilbert & Ellice Is., & Ocean Island
BY	China	KS4B, HKD	Serrana Bank & Roncador Cay	VR2	Fiji Islands
*C9	Manchuria	KS4	Swan Islands	VR3	Fanning & Christmas Is., Solomon Islands
CE	Chile	KS6	American Samoa	VR4	Tonga Islands
CE 9AA-AM, FB8Y, KC4, LA, LU-Z, OR4, UA1, VK0, VP8, ZL5, BJ	Antarctica	KV4	Virgin Islands	VR5	Pitcairn Island
CE 9AN-AZ (See VP8)		KW6	Wake Island	VR6	Singapore
CE 9A	Easter Island	KX6	Marshall Islands	*VS1, 9M4, 9V1	
CE 9JX	San Felix	KZ5	Canal Zone	VS1, 9M2 (See 9M2, 4)	Sarawak
CE 9Z	Juan Fernandez arch.	LA, LG	Norway	VS2 (See 9M2)	
CM, CO	Cuba	LA/P (See JX, JW)		*VS4	
*CN2	Morocco	LA/G (See 3Y)		VS4, ZC5 (See 9M6, 8)	
CN2, 8, 9	Bolivia	LA (See CE 9AA-AM)		VS5	
CP	Portuguese Guinea	LU	Argentina	V56	Brunel
CR 3, 5	Cape Verde Islands	LU-Z (See CE 9AA-AM, P8, VP8)		V59, P, S	Hong Kong
CR4	Principe, Sao Thomé	LX	Luxembourg	V59K	Aden & Socotra
CR5	Angola	LZ	Bulgaria	*VS9H	Kamaran Is.
CR6	Mozambique	M1 (See 9A1)		VS9M (See 8Q)	Kuria Muria Isls.
CR7	Damao, Diu	MP4B	Bahrein	VS9M (See 4M)	
*CR8	Goa	MP4D	Qatar	VU	Andaman & Nicobar Isls.
CR8, CR1B	Portuguese Timor	MP4D, T	Sultanate of Muscat & Oman	VU	
CR9	Macao	OA	Trucial Oman	VU	Laccadive Islands
CT1	Portugal	OD5	Peru	W (See K)	India
CT2	Azores	OE	Lebanon	XE, XF, 4A	
CT3	Madeira Islands	OH, OF	Austria	XF4	Mexico
CX	Uruguay	OHB	Finland	XP (See OX)	Revilla Gigedo
DJ, DK, DL, DM	Germany	OK	Aland Islands	*XT	
DU	Philippine Islands	ON	Czechoslovakia	XU	Voltaic Rep.
EA	Spain	0Q5, Ø (See 9Q5)	Belgium	XV5 (See 3W8)	Camodia
EA6	Balearic Islands	0R4 (See CE 9AA-AM)		XW8	
EA8	Canary Islands	0X, KG1, XP		XZ2	
EA9	Ilni	OY	Greenland	YA	Burma
EA9	Rio de Oro	OZ	Faroe Islands	YI	Afghanistan
EA9	Spanish Morocco	PA, PE, PI	Denmark	YJ	Iraq
EA9	Spanish Guinea	PJ	Netherlands Antilles	YJ, (FUB)	New Hebrides
EL	Republic of Ireland	PJ-M, S	Sint Maarten	YK	Syria
EL	Liberia	PK (See BF)		YN, YNB	Nicaragua
EP	Iran	*PK1, 2, 3		YO	Rumania
*ET2	Eritrea	*PK4	Java	YS	Salvador
ET3	Ethiopia	*PK5	Sumatra	YU	Yugoslavia
F	France	*PK6	Netherlands Borneo	YV	Venezuela
FA (See 7X)		PX	Celebes & Molucca Isls.	YVØ	Aves Island
FB8Z		PY	Alor	ZA	Albania
FB8Y (See CE 9AA-AM)	Amsterdam & St. Paul Is.	PYB	Brazil	ZB1 (See 9H1)	Gibraltar
FB8W		PYD	Fernando de Noronha	ZB2	
FB8X	Crozet Is.	PYD	St. Peter & St. Paul's Reefs	ZC3 (See VK9)	
FB8	Kerguelen Islands	PZ1	Trindade & Martin Vaz Is.	ZC4 (See 5B4)	
FB8 (See 5R8)		SK, SL, SM	Surinam	ZC5 (See 9M6, 8)	
FBB (See FR7)		SP	Sweden	*ZC5	British North Borneo
*FC	Corsica	ST2	Poland	ZD1 (See 9L1)	Palestine
FD (See 5V)		SU	Sudan	ZD2 (See 5N2)	
FFB (See TJ)		SV	...	ZD3	The Gambia
FF4 (See TU)		SV	...	ZD4 (See 9G1)	Gold Coast, Togoland
FF7 (See ST)		SV	Dodecanese	ZD5, ZS7	Swaziland
FF8 (See TY)		TA	Greece	ZD6 (See 7Q7)	
FF8 (See TZ)		TF	Turkey	ZD7	St. Helena
FF8 (See 5U7)		TG	Iceland	ZD8	Ascension Island
FF8 (See XT)		TI	Guatemala	ZD9	Tristan da Cunha & Gough Island
FF8 (See 6W8)		T19	Costa Rica	ZE	
*FFB	French West Africa	TJ, FEB	Cocos Island	ZF1, VPS	Rhodesia
FG7	Guadeloupe	*TL	Cameroon	ZK1	Cayman Islands
FH8, FB8	Comoro Islands	*TN	Central African Rep.	ZK1	Cook Islands
*F18	French Indo-China	*TR	Congo Rep.	ZK2	Mananiki Islands
FK8	New Caledonia	*TT	Gabon Rep.	ZL	Niue
FL8	French Somaliland	*TU	Chad Rep.	ZL	Auckland Is. & Campbell Is.
FM7	Martinique	*TY	Ivory Coast	ZL	Chatham Islands
*FN	French India	*TZ	Dahomey Rep.	ZL	Kermadec Islands
FO8	French Indochina	UA, UV, UW1-6, UN1	Mali Rep.	ZL	New Zealand
FO8	Clipperton Island	UA1	European Russian S. F. S. R.	ZL5 (See CE 9AA-AM)	
FO8M	French Oceania	UA1 (See CE 9AA-AM)	Franz Josef Land	ZM6 (See 5W1)	
FP6	Maria Theresa	UA2	Kaliningradsk	ZM7	
FP8 (See TL)		UA, UV, UW9, Ø	Asiatic R. S. F. S. R.	ZP	Tokelau
FP8 (See TT)		UB5, UT5, UY5	Ukraine	ZS1, 2, 4, 5, 6	Paraguay
FP8 (See TR)		UC2	White Russian, S. S. R.	ZS2	South Africa
*FP8	French Equatorial Africa	UD6	Azerbaijan	ZS3	Prince Edward & Marion Is.
*FR7	Glorioso Islands	UF6	Georgia	ZS7 (See ZD5)	Southwest Africa
*FR7	Juan de Nova	UG6	Amenia	ZS8 (See 7P8)	
FR7	Reunion	UH8	Turkoman	ZS9	
FR7	Tromelin	UI8	Uzbek	ZS1	
FS7	Saint Martin	WJ8	Tadzhik	ZS2	
FUB (See YJ)		UL7	Kazakh	ZS3	
FW8	Wallis & Futuna Islands	UM8	Kirghiz	ZV8	Tunisia
FY7	French Guiana & Imiti	*UN1	Karelo-Finnish Republic	3W8, XV5	Vietnam
G	England	UO5	Moldavia	3X, (7G)	Rep. of Guinea
GC	Guernsey & Dependencies	UP2	Lithuania	3Y, LA/G	Bouvet Island
GC	Jersey Island	UQ2	Latvia	4A (See XE)	
GD	Isle of Man	UR2	Estonia	4S7	
GI	Northern Ireland	VE, VO, 3B, 3C	Canada	4U	Ceylon
GM	Scotland	VK	Australia (inc. Tasmania)	4W	T. T. U. Geneva
GW	Wales	VK4	Lord Howe Island	4X, 4Z	Yemen
HA, HG	Hungary	VK9, ZC3	Willis Islands	5A	Israel
HB	Switzerland	VK9	Christmas Island	5B4, ZC4	Libya
HBO, HE	Liechtenstein	VK9	Cocos Islands	5H3, VQ3	Cyprus
HC	Ecuador	VK9	Nauru Island	EN2, ZD2	Tanganyika
HCB	Galapagos Islands	VK9	Norfolk Island	SR8, FB8	Nigeria
HE (See HBO)		VK9	Papua Territory	*ST	Malagasy Rep.
HH	Haiti	VK9 (See CE 9AA-AM)	Territory of New Guinea	*ST7	Mauritania
HI	Dominican Republic	VK9D		*ST7	Niger Rep.
HK	Colombia	VK9D	Heard Island	5V	Togo Rep.
HK8	Bajo Nuevo	VK9D	Macquarie Island	5W1, ZM6	Western Samoa
HK8	Malpelo Is.	V0 (See VE)	Newfoundland, Labrador	5X5, VQ5	Uganda
HK8	San Andres & Providencia	*VO	British Honduras	*Z4, VQ4	
HK8 (See KS4B)		VP1	Grenada & Dependencies	601, 2, 6	Kenya
HL, HM	Korea	*VP2K		*6W8, FFB	Somali Rep.
HP	Panama	*VP2A	Montserrat	6Y5, VPS	Senegal Rep.
HR	Honduras	*VP2B	St. Kitts, Nevis	*7G1 (See 3X)	Jamaica
HS	Thailand	*VP2D	St. Lucia	7P8, ZS8	Lesotho
HV	Vatican	*VP2G	St. Vincent & Dependencies	7D7, ZD6	Malawi
HZ, 7Z	Saudi Arabia	*VP2M		7X, FA	Algeria
I, IT	Italy	*VP2K		7Z (See HZ)	
*I1	Trieste	*VP2L		*8F, PK	
*I5	Italian Somaliland	*VP2S		8J (See CE 9AA-AM)	Indonesia
IS1	Sardinia	VP3 (See 8R)		8P, VP6	Barbados
JA, JH, KA	Japan	VP4 (See 9Y4)		80, VS9M	Maldives Islands
JT	Mongolia	VP5 (See ZF1)		8R, VP3	Guyana
JX, LA/P	Jan Mayen	VP5 (See 6Y5)		824, (9M3)	Saudi Arabia/Iran, Neutral Zone
JY	Jordan	VP5		8Z5 (See 9K3)	
JW, LA/P	Svalbard	VP6 (See 8P)		9A1, (M1)	San Marino
*ZD2	Netherlands New Guinea	VP7		9A1, ZD4	Ghana
K, W	United States of America	VP8		9A1, ZB1	Malta
KA (See JA)		VP8, LU-Z		9A2, VQ2	Zambia
KA1 (See KG6)		VP8, LU-Z		9A2, ZD5	Kuwait/Saudi Arabia, Neutral Zone
KB6	Baker, Howland & American Phoenix Islands	VP8, LU-Z		9A2, ZD5	Sierra Leone
KC4	Navassa Island	VP8, LU-Z, CE 9AN-AZ		9A2, ZD5	Malaya
KC6	Eastern Caroline Isls.	VP9		9A4 (See VS1)	West Malaysia
KC6	Western Caroline Isls.	VQ1		9A6, B	East Malaysia
KG1 (See OX)	Guantanamo Bay	VQ2 (See 9J2)		9N1	Nepal
KG4	Guam	VQ3 (See 5H3)		905, 0Q5, B	Rep. of the Congo
KG6, KA1	Bonin & Volcano Islands	VQ4 (See 5Z4)		*954	Saar
KG6, KA1	Marcus Island	VQ5 (See 5X5)		*9U5	Burundi
KG6R, S, T	Mariana Islands	*VQ6		*9U5	Ruanda-Urundi
KH6	Hawaiian Islands	VQ8		*9X5	Rwanda
KH6	Kure Island	VQ8		*9Y4, VP4	Trinidad & Tobago
		VQ9		*	Blenheim Reef
					Geyser Reef

FEDERAL COMMUNICATIONS COMMISSION EXAMINATION POINTS

Examinations for commercial and amateur radio operator licenses are conducted at the following F.C.C. field offices on the days designated by the Engineer in Charge of each office. Specific dates should be obtained from the Engineer in Charge.

Dist. No.	Office Location
1 -	BOSTON, MASSACHUSETTS 02109 1600 Customhouse, India & State Streets
2 -	NEW YORK, NEW YORK 10014 748 Federal Building, 641 Washington Street
3 -	PHILADELPHIA, PENNSYLVANIA 19106 1005 U.S. Customhouse, 2nd & Chestnut Streets
4 -	BALTIMORE, MARYLAND 21201 819 Federal Building, 31 Hopkins Plaza
5 -	NORFOLK, VIRGINIA 23502 Military Circle, 870 N Military Hwy
6 -	ATLANTA, GEORGIA 30303 1602 Gas Light Tower, 235 Peachtree St., NE
6S -	SAVANNAH, GEORGIA 31402 238 Post Office Building, York & Bull Streets
7 -	MIAMI, FLORIDA 33130 919 Federal Building, 51 S. W. First Avenue
7T -	TAMPA, FLORIDA 33602 738 Federal Building, 500 Zack Street
8 -	NEW ORLEANS, LOUISIANA 70130 829 Federal Building South, 600 South Street
8M -	MOBILE, ALABAMA 36602 439 U. S. Court House, 113 St. Joseph Street
9 -	HOUSTON, TEXAS 77002 5636 Federal Building, 515 Rusk Avenue
9B -	BEAUMONT, TEXAS 77701 239 Federal Building, 300 Willow Street
10 -	DALLAS, TEXAS 75202 707 Thomas Building, 1314 Wood Street
11 -	LOS ANGELES, CALIFORNIA 90012 U. S. Courthouse, 312 N. Spring Street
11SD -	SAN DIEGO, CALIFORNIA 92101 Fox Theatre Building, 1245 Seventh Avenue
11SP -	SAN PEDRO, CALIFORNIA 90731 300 South Ferry Street
12 -	SAN FRANCISCO, CALIFORNIA 94111 323A Custom House, 555 Battery Street
13 -	PORRTLAND, OREGON 97204 314 Multnomah Building, 319 S. W. Pine Street
14 -	SEATTLE, WASHINGTON 98104 8012 Federal Office Building, 909 First Avenue
15 -	DENVER, COLORADO 80202 504 New Customhouse, 19th bet. California & Stout St.
16 -	ST. PAUL, MINNESOTA 55101 691 Federal Building, 4th & Robert Streets
17 -	KANSAS CITY, MISSOURI 64106 1703 Federal Building, 601 East 12th Street
18 -	CHICAGO, ILLINOIS 60604 1872 U. S. Courthouse, 219 S. Dearborn Street
19 -	DETROIT, MICHIGAN 48226 1054 Federal Building, Washington & LaFayette St.
20 -	BUFFALO, NEW YORK 14203 328 Federal Office Building, 121 Ellicott St.
21 -	HONOLULU, HAWAII 96808 502 Federal Building, 335 South King Street
22 -	SAN JUAN, PUERTO RICO 00903 322 Federal Building
23 -	ANCHORAGE, ALASKA 99501 54 U S Post Office Building, 4th bet. F & G St.
24 -	WASHINGTON, D.C. 20554 Room 216, 1919 M Street, N.W.
GETTYSBURG, PENNSYLVANIA 17325 P. O. Box 441	

SPECIAL ARRL QN SIGNALS FOR NET USE

QNA*	Answer in prearranged order.
QNB*	Act as relay between and
QNC	All net stations Copy. I have a message for all net stations.
QND*	Net is Directed (controlled by net control station).
QNE*	Entire net please stand by.
QNF	Net is Free (not controlled).
QNG	Take over as net control station.
QNH	Your net frequency is High.
QNI	Net stations report In.* I am reporting into the net.
QNJ	Can you copy me? Can you copy ?
QNK*	Transmit messages for to
QNL	Your net frequency is Low.
QNM*	You are QRMing the net. Please stand by.
QNN	Net control station is * What station has net control?
QNO	Station is leaving the net.
QNP	Unable to copy you (or).
QNQ*	Move frequency to . . . and wait for . . . to finish handling traffic. Then send him traffic for
QNR*	Answer . . . and Relay (or Receive) traffic.
QNS	Following stations are in the net.* (Follow with list). Request list of stations in the net.
QNT	Leaving net Temporarily (or for . . . minutes).
QNU*	The net has traffic for YOU. Stand by.
QNV*	Establish contact with on this frequency. If successful, move to . . . and send him traffic for
QNW	How do I route messages for ?
QNX	You are excused from the net.* Request to be excused from the net.
QNY*	Shift to another frequency (or to . . . kc.) to clear traffic with
QNZ	Zero beat your signal with mine.

*For use only by Net Control Station

Notes on the Use of QN Signals

1. The QN signals listed above are special ARRL signals for use in amateur c.w. nets only. Other meanings that may be used in other services do not apply.
2. Some QN signals are for use by net control stations only; these are marked with an asterisk (*). Others have slightly different meanings when used by the NCS and net stations; in this case, the meaning when used by the NCS is marked with an asterisk (*).
3. Some QN signals have two meanings, the difference depending on how or by whom used. Examples: (a) QNC, when used as a preface to transmission of a message, carries its first meaning; when used by a station reporting into the net (e.g., W9NCS DE W9NET QNI QNC), it carries its second meaning. (b) QNI, when used by the NCS, is a request for stations to report in; when used by a net station, it means that this station is reporting in. (c) QNJ, when used alone, carries its first meaning; when followed by a call, it carries the second meaning.
4. QN signals are never followed by a question mark, even though the meaning may be interrogatory.
5. Do not use QN signals on phone nets. Say it with words.
6. Use QN signals in nets only. They are not for use in casual amateur conversation.
7. Make frequent use of standard international "Q" signals in traffic nets, for meanings not covered by QN signals. Examples: QRU, QRV, QSV, QTA, QTB, QTX, etc.

ARRL Communications Department

ARRL Adopted ICAO Phonetic Alphabet

(International Civil
Aviation Organization)

A	ALFA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JULIETT
K	KILO
L	LIMA
M	MIKE
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIERRA
T	TANGO
U	UNIFORM
V	VICTOR
W	WHISKEY
X	X-RAY
Y	YANKEE
Z	ZULU

ON GOOD PHONE OPERATING

1. Listen much . . . with care. Avoid distractions in your operating room. Tune the band well after each call.
2. Time your calls; monitor your own frequency. Call only when a station is free.
3. Make short calls, with breaks to listen. Speak clearly, at a steady, modest rate. Three short calls are better than one long one.
4. Use push-to-talk technique . . . speak near the mike. Watch the modulation indicator. Keep local background noise at a minimum.
5. Make notes. Avoid missing points for comment. Jet down topics to avoid repeats.
6. Talk in connected thoughts and phrases. Notes will help avoid mixing up subjects. Push-to-talk technique will keep brother amateurs from calling you a monologuist.
7. Speak naturally. QSOs need not be cut and dried. Make them interesting. Avoid exhibitionism. Use proper operating form to promote efficiency in communication and add respect and prestige for your station.

Use of this standard list is recommended by ARRL. Haphazard selection of words often results in confusion. A degree of uniformity in use of phonetic words reflects favorably on your individual operating, and on the whole amateur service.

American Radio Relay League
225 Main Street
Newington, Conn. 06111

TELEGRAPHERS' ABBREVIATIONS IN CURRENT USE

~ denotes short space, as in American Morse o, ~e; c, ~e; &, ~s.
— denotes letters sent together, as in *ar*, sent ——.

- A -

aa	all after
ab	all before
abl	able
abt	about
ads,adr	address
adv	advise
af	Africa
aftmn	afternoon
agn	again
ahd	ahead
alng	along
am	amplitude modulation
ani	any
anr	another
ant	antenna
app	appreciate
ar	end of message
as,as m	wait, wait a minute
au	fractions follow
aw	auf wiedersehen (Ger), see you later

- B -

b	be
b4	before
balun	balanced-to-unbalanced
bc,bcl	broadcast, broadcast listener
bcnu	be seeing you
bd	buenos dias (Sp), bad
bda	birthday
bee,bo,bth	both, as in "05 bee", up both (Morse)
bfo	beat frequency oscillator
bjr	bon jour (Fr)
bk,bkg	back,break,black,book,breaking
bkr	breaker,circuit-breaker
bn	been,brown,between,buenas noches (Sp)
bq	answer to rq (request)
brg,brng	bearing,heading
bsr	bon soir (Fr)
btr	better
buk	book

- C -

c	yes
cd	card,could
cd,cdud,cdnt	could,couldn't
cfm,cfmg	confirm,confirming
ck	check
ckt,cct	circuit
cl,clg	call,calling,closed
clbk	callbook
clix	clicks
clr	clear
cnfx,condx,cdx	conditions
cnt,cnti,cnty	count, county
cnvn.	convention
coz,cos,cuz,beucz	because
cpi	copy
eq	general call to all stations
cs	call sign,call letters
cua,cuagn	see you again
cul	see you later
cum,cm,cmg	come,coming
cupla	a couple of
cw	continuous wave,manual keying

- D -

da	day
dbl	double
dcn	direction
dct	direct
de	from
df	direction finder
df,dfif	difference
dfr,dld	dealer,deliver,delivered
dnu,d	down (in frequency)
dnt,dmi	do not, don't mention it
dpe	dope,information
dr	dear
ds	thanks,danke schon (Ger)
dsnt	does not
dsw	goodbye,do svidaniya (Russian)
dunno	don't know
dx	distance, or rare station
dxdpn	dx expedition

- E -

sem	old man
eh	?
el,els	antenna element(s)
em	them
eni,eniBDI,eniHW	any,anybody,anyhow
ere	here
es,es	ani (from Morse "&", sent)
eta	estimated time of arrival
etd	estimated time of departure
eu	Europe

- F -

fb,vfb	fine business,good (enthusiastic approval)
fd	field,day,feed,food
fer	for
fiver	QSA-5
fld	field,filed
ftr	floor
fm,frm	from,frequency modulation
fnd	friend, find, found
fni	funny
foxes	teleprinter test tapes
freq,fq	frequency
fwd	forward
fyi	for your information

- G -

ga	good afternoon,go ahead
gb	good bye
gd	good day, good
ges,gess	guess
gg	going
gl	good luck

- G - (Cont.)

gld	glad
gn,gng	gone,green,going
gnd	ground
gotta	got to,have to,must
gp	ground plane,group (word)
grs	groups (as in msg code groups)
gud	good
gtgs	greetings
gv,gvg	give,giving

- H -

hd,hdrd	had,hard,heard
hdg	heading,antenna azimuth
hed	he would
hi	high, laughter, (sometimes 't')
hlo	hello
hlv	hasta la vista (Sp), see you later
hpe,hpg	hope,hoping
hpi	happy
hpn,wa hpn	happen,what happened
hq,hqdrtrs	headquarters
hr,hrg,hrs	here,hear,hour,hearing,here is,hours
hv,hvnt,hvg	have,haven't,having
hvi	heavy
hw,hws	how? how is?

- I -

i?	ready? here goes the tape
id	I would
fe	clear? (response: i-go, e-wait)
im	I'm,him,intermodulation
imt	?
info	information
irpt	I repeat

- K -

k	go ahead,end of transmission
ka	beginning of transmission (formal)
klix	clicks
klvb	que (ke) le vaya bien (Sp)
kn	"That it goes well with you"

knw	know
-----	------

- L -

lkg	looking
ll	landline,telephone or telegraph
lng	long
lotsa	lots of
lp	long path (long way around earth)
lqn	listen
ltr	letter,later
lv,lvg	leave,leaving
lw	long wave,"lone wolf" (independent DXer)

- M -

mag,rag	magazine
mci,mci bcp	merci, merci beaucoup (Fr), thanks
mgr	manager
mi	my
mil,mill,ma	millampere,typewriter
min	minute,minimum
mk	mark (opposite of space)
ml,mlg	mail, mailing
mng	morning,meaning
mni	many
mnl	manual
mo	moment~
msg	message

- N -

n	no
nd	nothing doing
ng	no good
nil	nothing
nir	lazy "nil"
nm	nothing more,no more
nn	noon
no	know
nr	near,number
nvr	never
nw	now

- O -

ob,ob&b	old boy
oc	old chap
ok,ok&k	all correct
ol	old lady
om,om&m	old man
op,opr	operator
opn,opg,opg	operation,operating
ot	old timer

- P -

pa	power amplifier
pbl,pbli	probable,preamble,probably
pcts	practices
pd	period,paid
pdc	pure dc,clean note
pkg	package,parking
plsr	pleasure
ppgn	propagation
ppl	people
prtbl	portable
pse,pls,psd	please,pleased
psb,psbli	possible, possibly
psn,psn	position
pt,ptd,ptg	point,part,pointed,pointing
pwr	power

- Q -

qhm	tuning from high frequency to middle of band
qlf	try sending with left foot awhile
qlm	tuning from low frequency to middle of band
qlz	operator too lazy
qmh	tuning from middle frequency to high frequency
qml	tuning from middle frequency to low frequency
qmt	try mailing your tlc
qrnn	man-made electrical noise
qsl	mail card confirming qso
qsl1	send card after receiving mine
qst	of interest to all amateurs

- R -

r	received
rac	rectified ac
rc	rag chew
rcd,rcd	received
rcr,rcr,rcrv,rx	receiver
rd	read (copy),red
rdi,rdy	ready
rdo	radio,radio station
re	concerning
reg,reg	regular,regulations
rito	righto
rm	room
rng	running
rockbound,rockbnd	crystal controlled, no vfo
rpt	report,repeat
rq	request
rst	readability 1-5,strength 1-9,tone 1-9

- S -

sa,sez,sed,sa	say,says,said, South America
sae	self-addressed envelope
sase	self-addressed stamped envelope
sb,ssb	single sideband
sgd	signed
shd,shud,shudn't	should,shouldn't
sig,sigs	signal(s),signature
simo	simultaneously
sked	schedule
sl	see you later
sn	soon,seen,signal/noise
sp	short path (the closer great-circle path)
sri	sorry
ssn	season,as in "ssns gtgs"
str	station
su	I'll see you
sum	some
sumbd	somebody
svc	service
svl	several
sw	switch,short wave
sx	dollar sign "\$"

- T -

tbl,tbl	trouble
tfc	traffic, messages
thr	therz,their
tmw	tomorrow
tng	tuning,thing
unk	think
tnsmsn	transmission
tr	transit,position,there,transmit/receive
T/R	transmit/receive
trix	tricks
tt,ts	that,that is
tu,tku,tnx,tks	thank you, thanks
tv,tvi	television,television interference
twx	telegram
tx,trans	transmitter

- U -

u,up	you,upward in frequency

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73

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GREAT CIRCLE BEARINGS IN THE UNITED STATES

ATLANTA, GA.	264	322	47	24	25	301	343	15	86	269	297	320	7	271	310	251	347	145	306	281	347	154	305	331	321	234	48	64	48	278	27	318	296	289	308	48	84				
BIRMINGHAM, ALA.	82	326	50	31	40	304	356	26	84	268	299	328	17	270	312	246	5	125	314	287	281	10	142	355	338	0	219	52	67	53	278	37	333	298	290	309	53	83			
BISMARCK, N. D.	132	137	92	97	115	209	114	165	124	167	205	133	104	198	273	165	119	132	148	150	233	123	135	109	108	131	151	99	111	102	217	106	134	237	249	282	107	119			
BOSTON, MASS.	236	241	291	277	247	278	273	267	226	254	275	275	274	262	293	246	263	220	268	253	273	256	207	278	286	249	237	235	219	233	268	258	280	295	236	217					
BUFFALO, N. Y.	208	217	291	92	206	273	264	237	192	241	269	268	261	252	290	231	243	191	258	237	267	231	184	274	286	225	219	118	160	134	261	199	248	276	293	159	174				
CHARLESTON, W. VA.	208	223	307	61	24	287	309	359	174	251	282	293	260	300	238	293	180	279	251	274	270	174	316	311	245	223	66	108	71	269	31	275	286	282	301	80	143				
CHEYENNE, WYO.	108	112	26	76	91	81	81	103	140	187	83	79	189	319	143	90	113	101	119	241	95	119	76	62	104	128	81	92	83	219	84	98	268	262	303	87	100				
CHICAGO, ILL.	161	175	302	82	78	125	272	93	144	221	266	268	80	242	293	210	151	155	245	208	262	157	156	350	308	173	190	91	116	97	254	101	212	274	272	295	106	131			
CLEVELAND, OHIO	197	209	297	80	55	179	277	277	176	240	272	275	310	252	293	228	245	180	261	235	268	226	175	290	296	219	214	95	136	105	262	127	250	278	277	296	124	156			
COLUMBIA, S. C.	288	267	317	41	10	354	289	329	356	270	295	311	350	271	308	256	326	189	300	279	282	320	174	331	323	297	246	39	53	37	279	7	305	295	290	307	33	85			
DALLAS, TEXAS	81	82	349	57	49	61	325	36	50	80	319	15	45	266	325	157	47	97	15	61	280	55	112	32	11	65	115	60	71	61	277	55	40	308	291	315	63	80			
DENVER, COLORADO	103	107	22	73	72	87	6	75	77	99	134	74	74	189	325	138	84	109	91	112	246	90	116	70	55	98	124	78	88	80	224	80	91	283	267	308	83	96			
DES MOINES, IOWA	134	144	318	80	78	105	271	84	87	123	197	262	81	231	297	187	105	135	197	171	257	116	141	69	5	133	165	87	104	91	247	92	137	273	270	296	97	115			
DETROIT, MICH.	188	200	295	86	79	164	273	263	129	168	233	268	268	248	291	222	224	174	254	227	265	208	171	282	292	206	207	100	133	109	258	128	238	275	274	294	124	151			
EL PASO, TEXAS	77	78	14	58	54	64	8	50	56	76	79	8	42	53	345	98	57	86	48	71	285	62	97	46	33	68	92	61	69	62	290	59	57	335	298	327	64	75			
HELENA, MONTANA	112	116	85	84	88	100	133	97	93	108	134	141	105	92	162	136	101	115	115	122	203	105	119	94	91	111	127	89	98	92	180	94	109	179	224	283	95	104			
HOUSTON, TEXAS	64	60	348	50	40	49	329	25	39	67	338	325	6	34	285	327	34	84	3	26	288	40	103	22	5	46	86	52	60	53	289	45	24	314	297	319	5	68			
INDIANAPOLIS, IND.	166	185	308	72	58	110	281	332	62	143	234	276	290	41	250	298	220	157	267	226	168	158	338	316	188	198	80	107	85	261	80	251	281	277	298	94	127				
JACKSONVILLE, FLA.	327	309	324	33	9	1	308	339	0	8	286	304	323	355	282	314	273	340	314	300	288	338	163	341	322	326	271	29	34	28	287	8	323	303	295	312	23	39			
KANSAS CITY, MO.	120	129	332	72	67	90	288	60	73	111	196	278	15	66	236	306	184	82	126	95	134	50	9	113	157	78	93	81	253	79	97	282	275	302	85	105					
LITTLE ROCK, ARK.	97	104	335	59	48	65	307	26	48	92	243	300	352	41	260	315	208	43	114	338	276	55	128	21	356	71	158	62	76	64	271	56	22	297	286	309	67	89			
LOS ANGELES, CALIF.	81	82	41	62	61	70	52	62	65	79	88	57	60	62	100	19	96	67	87	67	81	70	94	59	52	76	92	65	71	66	95	67	69	35	319	348	68	78			
LOUISVILLE, KY.	166	190	313	66	47	87	287	339	43	137	242	282	301	26	256	302	227	348	156	280	239	271	158	342	322	202	205	71	98	75	266	63	278	285	281	301	82	120			
MIAMI, FLORIDA	337	326	329	22	3	355	313	342	356	355	302	310	329	353	291	318	290	342	345	321	315	293	341	342	335	334	298	18	16	15	293	1	330	308	299	315	11	13			
MILWAUKEE, WIS.	162	175	297	87	88	132	267	170	107	147	218	261	253	99	239	290	207	157	156	235	204	259	160	157	298	172	188	98	121	103	251	111	203	271	270	293	113	135			
MINNEAPOLIS, MINN.	145	154	291	91	96	123	248	125	108	135	193	242	184	105	227	283	186	132	144	189	175	248	137	146	114	148	169	99	116	104	237	110	159	259	261	287	111	127			
NASHVILLE, TENN.	140	180	320	59	40	61	295	354	36	114	251	290	318	24	261	307	231	8	142	298	254	275	22	150	353	333	205	63	83	65	271	50	313	291	285	305	68	103			
NEW ORLEANS, LA.	50	37	337	46	32	38	318	9	28	60	299	313	347	22	283	321	270	17	86	339	339	288	22	114	7	351	23	46	56	47	287	35	359	308	296	315	47	64			
PITTSBURGH, PA.	210	221	300	72	18	213	280	286	308	188	246	276	281	310	257	295	235	264	189	268	244	271	246	181	236	299	234	222	85	140	96	265	261	281	279	297	123	165			
ST. LOUIS, MO.	134	150	320	70	60	90	287	30	63	119	224	280	319	53	248	303	207	68	137	280	204	267	94	143	20	342	130	179	75	95	79	250	74	284	278	301	84	110			
SALT LAKE CITY, UTAH	99	101	50	73	74	86	83	79	78	95	118	98	80	76	152	359	123	84	103	91	104	220	88	109	75	67	95	114	78	86	80	181	80	90	254	315	83	92			
SAN FRANCISCO, CALIF.	86	86	54	66	67	75	70	70	83	96	75	70	68	109	39	101	73	90	77	88	136	77	96	67	62	81	97	69	76	71	77	66	1	73	81						
SEATTLE, WASHINGTON	103	105	87	81	84	94	111	92	89	100	118	116	97	88	136	96	120	95	105	103	109	165	97	109	80	88	102	114	85	92	87	147	89	100	128	181	90	97			
WASHINGTON, D. C.	233	234	302	52	342	291	290	303	319	236	284	286	295	318	262	281	287	308	263	298	245	280	205	277	257	275	268	192	300	302	254	235	53	163	53	270	305	273	285	300	189

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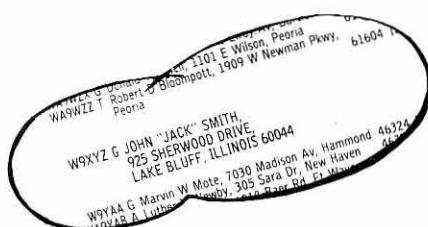
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PREFIX	COUNTRY	BEARING	MILES	PREFIX	COUNTRY	BEARING	MILES	PREFIX	COUNTRY	BEARING	MILES
A2C,ZS9	BOTSWANA, MAFEKING	75	10436	KR6,8	RYUKYU IS (OKINAWA)	303	6059	VP8,LU-Z	SCOTT GEORGIA IS	139	8113
AC3	SIKKIM, GANGTOK	331	7527	KS4	SWAN IS	111	2734	VP8,LU-Z	SCOTT GRKNEY IS	148	8086
AC4	TIBET, LHASA	330	7288	KS4B,HK0	SERRANA EANK & RONCADOR CAY	111	3071	VP8,LU-Z	SOUTH SANDWICH IS	140	8577
AC5	BHUTAN	330	7500	KS6	AMERICAN SAMOA	231	4771	VP8,LU-Z	SOUTH SHETLAND IS	151	7876
AP	EAST PAKISTAN, DACC	328	7686	KV4	VIRGIN IS, CHARLOTTE AMALIE	95	3703	VP9	BERMUDA IS, HAMILTON	79	3230
AP	WEST PAKISTAN, KARACHI	350	8064	KW6	WAKE IS	274	4386	VQ1	ZANZIBAR	33	9959
BV	TAIWAN (FORMOSA), TAIPEI	306	6470	KX6	MARSHALL IS	265	4732	VQ9	CHAGOS IS	334	10072
BY	CHINA, PEKING	319	5921	KZ5	CANAL ZONE, COLON	116	3304	VQ9	SEYCHELLES IS	3	10180
C21,VK9	REP. OF NAURU	258	5173	LA,LF,LJ	NORWAY, OSLO	22	5186	VR1	BRITISH PHOENIX IS	251	5089
C31,PX	ANDORRA, ANDORRA	39	5881	LU	ARGENTINA, BUENOS AIRES	132	6510	VR1	GILBERT, ELLICE & OCEAN IS	249	4935
CE	CHILE, SANTIAGO	139	5909	LX	LUXEMBOURG, LUXEMBOURG	31	5612	VR2	FIJI IS, SUVA	237	5464
CE9	S. SHETLAND IS	152	7850	LZ	BULGARIA, SOFIA	25	6454	VR3	FANNING & CHRISTMAS IS	234	3286
CE0A	EASTER IS	167	4566	M1,9A1	SAN MARINO, SAN MARINO	31	6114	VR4	SLCIMON IS	257	5950
CE0X	SAN FELIX IS	141	5200	MP4B	BAHRAIN IS	7	8017	VR5	TONGA IS, NUKALOFA	230	5312
CE0Z	JUAN FERNANDEZ	145	5606	MP4D	DAS IS	5	8096	VR6	PITCAIRN IS	188	4372
CN,CO	CUBA, HAVANA	101	2594	MP4M	MUSCAT & OMAN, MASQAT	359	8175	VS5	BRUNEI	295	7730
CN2,8,9	MOROCCO, CASABLANCA	49	5939	MP4Q	QATAR	7	8086	VS6	HONG KONG	308	6926
CP	BOLIVIA, LA PAZ	126	5129	MP4T	TRUCIAL STATES	4	8170	VS9A,P,S	SOUTH YEMEN, ADEN	16	8843
CR3	PORTUGUESE GUINEA, BISSAU	70	6586	DA	PERU, LIMA	130	4528	VS9K	KAMARAN IS	17	8677
CR4	CAPE VERDE IS	72	5995	OD5	LEBANON, BEIRUT	19	7276	VU	INDIA, CALCUTTA	330	7804
CR5	PRINCIPE & SAO TOME IS	62	8258	OE	AUSTRIA, VIENNA	26	5987	VU4	LACCADIVE IS	340	8997
CR6	ANGOLA, NOVA LISBOA	67	9375	OH	FINLAND, HELSINKI	16	5436	VU5	ANDAMAN & NICOBAR IS	319	8312
CR7	MOZAMBIQUE, LOURENCO MARQUES	68	10799	OH0	ALAND IS	18	5355	XE,XF,4A	MEXICO, MEXICO CITY	126	1918
CR8	PORTUGUESE TIMOR	276	7784	OK,OL	CZECHOSLOVAKIA, PRAGUE	26	5822	XE4	REVILLAGIGEDO IS	149	1671
CR9	MACAO	308	6926	ON	BELGIUM, BRUSSELS	31	5503	XT2,FF8	UPPER VOLTA, OUAGADOUGOU	61	7283
CT1	PORTUGAL, LISBON	46	5661	OX,XP	GREENLAND, GODTHAB	34	3331	XU	CAMBODIA, PHNOM PENH	308	7838
CT2	AZORES IS	56	4894	OY	FAEROES IS, TORSHAVN	27	4672	XW8	LAOS, VIENTIANE	314	7593
CT3	MADEIRA IS	55	5597	OZ	DENMARK, COPENHAGEN	24	5454	XZ2	BURMA, RANGOON	319	7913
CX	URUGUAY, MONTEVIDEO	131	6592	PA,PE,PI	NETHERLANDS, AMSTERDAM	30	5478	YA	AFGHANISTAN, KANDAHAR	353	7599
DC,DJ-L	W. GERMAN FEDERAL REP., BONN	30	5586	PJ2	NETH. ANTILLES, CURACAO	104	3733	YB-D,BF,PKINDONESIA, DJAKARTA	293	8655	
DM	E. GERMAN DEM. REP., BERLIN	25	5625	PJ3,9	KETH. ANTILLES, ARUBA	104	3637	YI	IRAQ, BAGHDAD	12	7476
DU	PHILIPPINES, MANILA	299	6955	PJ4,9	NETH. ANTILLES, BONAIRE	103	3786	YJ,FUB	NEW HEBRIDES, VILA	243	5938
EA	SPAIN, MADRID	43	5804	PJ5	NETH. ANTILLES, ST. EUSTATIUS	95	3851	YK	SYRIA, DAMASCUS	19	7360
EA6	BALERIC IS	39	6106	PJ6	NETH. ANTILLES, SABA	94	3812	YN,HT	NICARAGUA, MANAGUA	119	2867
EAB	CANARY IS	58	5911	PJ7	NETH. ANTILLES, SINT MAARTEN	94	3812	YO	ROMANIA, BUCHAREST	22	6457
EA9	CEUTA & MELILLA	46	5963	PY	BRAZIL, BRASILIA	112	6085	YS	EL SALVADOR, SAN SALVADOR	120	2626
EA9	SPANISH SAHARA(RIO DE ORO)	60	6188	PY7	FERNANDO DE NORONHA	93	6417	YU,YT	YUGOSLAVIA, BELGRADE	26	6262
E1	IRELAND, CUBLIN	34	5109	PY8	TRINIDADE & MARTIN VAS IS	105	7282	YY	VENEZUELA, CARACAS	104	3925
EL,5L	LIBERIA, MONROVIA	55	8191	PZ	SURINAM, PARAMARIBO	99	4740	YV8	AVES IS	102	3839
EP	IRAN, TEHRAN	6	7397	SK,SL,SM	POLAND, WARSAW	22	5858	ZB2	GIBRALTAR	40	6336
F	FRANCE, PARIS	33	5550	ST	SUDAN, KHARTOUM	28	8400	ZC4,5B4	CYPRUS, NICOSIA	21	7173
FB8Z	AMSTERDAM & ST. PAUL IS	263	11339	SU	EGYPT, CAIRO	24	7455	ZD3	GAMBIA, BATHURST	70	6489
FB8W	CROZET IS	155	11815	SV	GREECE, ATHENS	26	6787	ZD5,ZS7	SWAZILAND, MBABANE	70	10697
FB8X	KERGUELEN IS	213	11489	SV	CRETE	27	6998	ZD7	ST. HELENA IS	79	8981
FC	CORSICA	34	6139	SV5	DODECAEANAE IS	25	6983	ZD8	ASCENSION IS	85	7568
FG7	GUADELOUPE IS	95	3945	TA,TC	TURKEY, ANKARA	19	6848	ZD9	TRISTAN DA CUNHA & GOUGH IS	112	8720
FH8,FB8	CCMORO IS	31	10451	TF	ICELAND, REYKJAVIK	30	4203	ZE	RHODESIA, SALISBURY	57	10339
FK8	NEW CALEDONIA, NOUMEA	242	6219	TG	GUATEMALA, GUATEMALA CITY	120	2530	ZF1,VP5	CAYMAN IS	105	2857
FL8	FRENCH SOMALILAND, DJIBOUTI	18	8878	TI	COSTA RICA, SAN JOSE	119	3061	ZK1	COOK IS	217	4620
FM7	MARTINIQUE	95	4040	TJ,FE8	COAMEROON, YAOUNDE	56	8341	ZK1	MANIHIKI IS	224	4104
FO8	FRENCH POLYNESIA, TAHTI	209	4230	TL8,FF8	CENTRAL AFRICAN REP., BANGUI	49	8645	ZL	NEW ZEALAND, AUCKLAND	225	6537
FO8	CLIPPERTON IS	153	2096	TN8,FF8	CCNGO REPUBLIC, BRAZZAVILLE	60	8891	ZL	AUCKLAND & CAMPBELL IS	219	7514
FP8	ST. PIERRE & MIQUELON IS	57	3347	TR8,FF8	GABON REPUBLIC, LIBREVILLE	62	8404	ZL	CHATHAM IS	216	6608
FR7	GLORIOSO IS	22	10484	TR8,FF8	CHAD REPUBLIC, FORT-LAMY	48	8037	ZL	KERMADEC IS	226	5907
FR7	JOAN DE NOVA	36	10760	TT2,FF4	IVORY COAST, ABIDJAN	68	7520	ZM7	TCKELAU IS	236	4551
FR7	REUNION IS, SAINT-DENIS	8	11278	TY,FF8	DAHOMEY REP., PORTO NOVO	62	7818	ZP	PARAGUAY, ASUNCION	125	6025
FR7	TROTELIN	9	10927	TY2,FF8	UGANDA, KAMPALA	64	6943	ZS1,2,4-6	SCUTH AFRICA, CAPE TOWN	95	10233
FS7	SAINT MARTIN IS	94	3812	TZ,FZ8	MALI REPUBLIC, BAMAKO	64	5693	ZS2	PRINCE EDWARD & MARION IS	129	11269
FU8,YJ	NEW HEBRIDES, VILA	243	5938	UA,K,V,W	EUROPEAN RUSS.S.F.S.R., MOSCOW	11	5861	ZS3	S.W. AFRICA (NAMIBIA), WINDHOEK	79	9846
FW8	WALLIS & FUTUNA IS	236	5035	UA1,UK	FRANZ JOSEF LAND	0	4233	ZS4	MCNAOCO	34	5968
FY7	FRENCH GUIANA, CAYENNE	7	9544	UA2,UK	KALININGRADSK	21	5657	ZA	CEYLON, COLOMBO	330	9032
G	ENGLAND, LONDON	33	5387	UA,K,V,W	ASIA/TIC RUSSIAN S.F.S.R.	346	5858	3B6,VQ8	UNITED NATIONS, GENEVA	33	5829
GC	GUERNSEY & DEPENDENCIES	35	5426	UB,K,T5,YU	UKRAINIANS S.S.R.	16	6245	3B8,VQ8	MAURITIUS IS	359	11219
GC	JERSEY IS	35	5426	UC2,UK	WHITE RUSSIAN S.S.R.	17	5860	3B9,VQ8	RDRIGUEZ IS	344	11177
GD	ISLE OF MAN, DOUGLAS	33	5121	UD6,UK	AZERBAIDZHAN S.S.R.	8	7027	3C,EA0	EQUATORIAL GUINEA, BATA	59	8351
GI	NORTHERN IRELAND, BELFAST	33	5016	UF6,UK	GEORGIAN S.S.R.	10	6865	3V8	TUNISIA, TUNIS	36	6450
GM	SCOTLAND, GLASGOW	31	5026	UG6,UK	ARMENIAN S.S.R.	11	6990	3W8,XV5	S. VIETNAM, SAIGON	306	7804
GW	WALES, CARDIFF	34	5297	UH8,UK	TURKMEN S.S.R.	358	7067	4S7	CEYLON, COLOMBO	330	9032
HA,HG	HUNGARY, BUDAPEST	25	6118	UJ8,UK	UZBEK S.S.R.	355	6985	4U	UNITED NATIONS, GENEVA	33	5829
HB	SWITZERLAND, BERN	32	5804	UJ8,UK	TADZHIK S.S.R.	349	7070	4W1,3	YEMEN, SANAA	16	8693
HB,HE	LIECHTENSTEIN, VADUZ	30	5889	UL7,UK	KAZAKH S.S.R.	353	6481	4X4,4Z4	ISRAEL, TEL AVIV	20	7407
HC	ECUADOR, QUITO	122	3848	UM8,UK	KIRGHIZ S.S.R.	347	6890	5A	LIBYA, TRIPOLI	36	6774
HC8	GALAPAGOS IS	134	3331	UO5,UK	MOLDAVIN S.S.R.	19	6324	5H3,VQ3	TANGANYIKA, DAR-ES-SALAAM	33	10022
HH	HAITI, PORT-AU-PRINCE	99	3285	UP2,UK	LITHUANIAN S.S.R.	18	5668	5N2,ZD2	NIGERIA, LAGOS	62	7818
HI	DOMINICAN REP., SANTO DOMINGO	98	3432	UQ2,UK	LATVIAN S.S.R.	17	5623	5R8,FB8	MALAGASY REP., TANANARIVE	27	11027
HK	COLOMBIA, BOGOTA	115	3841	UR2,UK	ESTONIAN S.S.R.	16	5498	5T5,FF7	MAURITANIA, NOUAKCHOTT	66	6316
HK0	MALPELO IS	122	3457	VE1	LAOS, VIENTIANE	61	3004	5U7,FF8	SENEGAL REP., DAKAR	69	6400
HM,HL9	SAN ANDRES & PROVIDENCIA IS	113	3066	VE2	CANADA, MONTREAL	61	2515	5V,FD	TGCG, LCME	63	7721
HP	PANAMA, PANAMA	116	3304	VE4	CANADA, WINNIPEG	68	4741	5W1,VM6	WESTERN SAMOA, APIA	232	4814
HR	HNDRURAS, TEGUCIGALPA	118	2722	VE5	CANADA, SASKATOON	32	2333	5Z4,VQ4	KENYA, NAIROBI	32	9588
HS	THAILAND, BANGKOK	313	7894	VE6	CANADA, EDMONTON	19	1206	601,2,6	SCMALI REP., MOGADISHO	19	9582
HV	VATICAN CITY	32	6228	VE7	CANADA, VANCOUVER	358	775	6W8,FF8	SENEGAL REP., DAKAR	69	6400
HZ,7Z	SAUDI ARABIA, MECCA	19	8159	VE8	CANADA, WHITEHORSE	345	1695	6Y5,VP5	JAMAICA, KINGSTON	104	3057
I,IR0	ITALY, RMCE	32	6228	VK,AX	AUSTRALIA, BRISBANE	245	7072	7G1,3X	REP. OF GUINEA, CONAKRY	71	6779
IS	SARDINIA	35	6250	VK2	LODO HOWE IS	238	6992	7P8,ZS8	LESOTHO, MASERU	80	10592
IT	SICILY	34	6575	VK7	TASMANIA IS, HOBART	234	7961	7Q7,ZD6	MALAWI, BLANTYRE	49	10409
JA,JH,JR	JAPAN, TOKYO	303	5118	VK9AA-MZ	PAPUA & NEW GUINEA TERR.	263	6638	7X,FA	ALGERIA, ALGIERS	41	6212
JD	OGASAWARA IS (BONIN)	295	5389	VK9N	NORFOLK IS	235	6448	7Z,HZ	SAUDI ARABIA, MECCA	19	8225
JDI	MINAMI-TORI-SHIMA IS (MARCUS)	286	4894	VK9X	CHRISTMAS IS	290	8891	8P6,VP6	BARBADOS IS, BRIDGETOWN	97	4175
JT1	MONGOLIA, ULAN BATOR	329	5783	VK9Y	COCOS IS	296	9438	8Q4,VS9M	MALDIVES IS	337	9461
JW,LA/P	VALBARD IS	8	4289	VK0	HEARD IS	210	1166	8R,VP3	GUYANA, GEORGETOWN	101	4536
JX,LA/P	JAN MAYEN IS	18	4176	VK0	MACQUARIE IS	218	7910	8Z4	SAUDI ARABIA/IRAQ NEUTRAL Z		

INTERNATIONAL POSTAL RATES

The following postal rates cover QSL cards, first class letters and air mail letters from the United States to Countries outside of the United States and Possessions.

FIRST CLASS RATES to countries other than Canada and Mexico, 1 ounce, 15¢; over 1 to 2 ounces, 26¢; over 2 to 4 ounces, 34¢; over 4 to 8 ounces, 76¢; over 8 ounces to 1 pound, \$1.44; over 1 to 2 pounds, \$2.40; and over 2 to 4 pounds, \$3.84.

AIR MAIL RATES are the rate for each half ounce, except where indicated.

QSL CARDS and **AEROGRAMMES** (air letter sheets) may be sent to any country in the world by air mail for 15¢ (exception: to Canada and Mexico, QSL cards are 9¢ by air mail).

INTERNATIONAL REPLY COUPONS of United States issue may be purchased at United States post offices for 22¢ each. Each coupon is exchangeable at a post office in any country for a stamp or stamps representing the international postage on a single rate surface letter. The column marked "(Air) IRC" indicates the number of international reply coupons required to prepay an air mail letter of the first weight unit from the countries indicated to the United States.

These rates include all revisions up to press time of this issue.

	QSL cards	First class	Air mail	(Air) IRC		QSL cards	First class	Air mail	(Air) IRC		QSL cards	First class	Air mail	(Air) IRC
Afghanistan.....	\$.10	.15	.21	5	Great Britain.....	\$.10	.15	.21	2	Pakistan.....	\$.10	.15	.21	2
Aland Is. (Finland).....	.10	.15	.21	2	Greece (incl. Crete).....	.10	.15	.21	2	Panama.....	.10	.15	.17	2
Albania.....	.10	.15	.21	4	Greenland (Denmark).....	.10	.15	.21	2	Papua Territory (Australia).....	.10	.15	.21	3
Algeria.....	.10	.15	.21	2	Grenada & Grenadines.....	.10	.15	.17	4	Paraguay.....	.10	.15	.17	3
Andorra.....	.10	.15	.21	2	Guadalupe Is.....	.10	.15	.17	2	Persian Gulf Ports.....	.10	.15	.21	4
Angola (Portugal).....	.10	.15	.21	3	Guatemala.....	.10	.15	.17	2	Peru.....	.10	.15	.17	3
Argentina.....	.10	.15	.17	3	Guiana, French.....	.10	.15	.17	2	Philippines.....	.10	.15	.21	3
Ascension Is. (Great Britain)...	.10	.15	.21	3	Guinea, Portuguese.....	.10	.15	.21	2	Pitcairn Is. (Great Britain)...	.10	.15	.21	
Australia.....	.10	.15	.21	4	Guinea, Republic of.....	.10	.15	.21	2	Poland.....	.10	.15	.21	2
Austria.....	.10	.15	.21	2	Guyana.....	.10	.15	.17	4	Portugal.....	.10	.15	.21	2
Azores Is. (Portugal).....	.10	.15	.21	2	Haiti.....	.10	.15	.17	5	Qatar.....	.10	.15	.21	4
Bahama Is. (Great Britain)....	.10	.15	.17	2	Honduras, British.....	.10	.15	.17	2	Reunion Is. (France).....	.10	.15	.21	2
Balearic Is. (Spain).....	.10	.15	.21	2	Honduras, Republic of.....	.10	.15	.17	3	Rhodesia.....	.10	.15	.21	5
Barbados Is. (West Indies)....	.10	.15	.17	3	Hong Kong.....	.10	.15	.21	5	Romania.....	.10	.15	.21	3
Belgium.....	.10	.15	.21	2	Hungary.....	.10	.15	.21	2	Rwanda.....	.10	.15	.21	2
Bermuda Is.....	.10	.15	.17	2	Iceland.....	.10	.15	.21	2	Ryukyu Is.....	.10	.15	.21	
Blutan.....	.10	.15	.21		India.....	.10	.15	.21	3	St. Helena Is. (Great Britain)....	.10	.15	.21	3
Bolivia.....	.10	.15	.17	2	Indonesia.....	.10	.15	.21	3	St. Pierre and Miquelon Is. (France)....	.10	.15	.17	2
Botswana.....	.10	.15	.21	5	Iran.....	.10	.15	.21	4	Samoa, Western (Great Britain)....	.10	.15	.21	4
Brazil.....	.10	.15	.17	2	Iraq.....	.10	.15	.21	3	Saudi Arabia.....	.10	.15	.21	3
Brunei.....	.10	.15	.21	8	Ireland (Eire).....	.10	.15	.21	3	Senegal.....	.10	.15	.21	2
Bulgaria.....	.10	.15	.21	3	Israel.....	.10	.15	.21	3	Seychelles Is. (Great Britain)....	.10	.15	.21	3
Burma.....	.10	.15	.21	4	Italy.....	.10	.15	.21	2	Sierra Leone.....	.10	.15	.21	3
Burundi.....	.10	.15	.21	3	Ivory Coast.....	.10	.15	.21	2	Solomon Is. (Great Britain)....	.10	.15	.21	5
Cambodia.....	.10	.15	.21	3	Jamaica.....	.10	.15	.17		Somalia.....	.10	.15	.21	
Cameroon.....	.10	.15	.21	2	Japan.....	.10	.15	.21	2	South Africa.....	.10	.15	.21	5
Canada.....	.06	.08	.11*	2	Jordan.....	.10	.15	.21	3	South-West Africa (Namibia)....	.10	.15	.21	5
Canary Is. (Spain).....	.10	.15	.21	2	Kenya.....	.10	.15	.21	4	South Yemen.....	.10	.15	.21	5
Cape Verde Is. (Portugal)....	.10	.15	.21	3	Korea.....	.10	.15	.21	3	Spain.....	.10	.15	.21	2
Cayman Is. (West Indies)....	.10	.15	.17	3	Kuwait.....	.10	.15	.21	4	Spanish West Africa.....	.10	.15	.21	2
Central African Republic.....	.10	.15	.21	2	Laos.....	.10	.15	.21		Sudan.....	.10	.15	.21	3
Ceylon.....	.10	.15	.21	5	Lebanon.....	.10	.15	.21	3	Surinam.....	.10	.15	.17	1
Chad.....	.10	.15	.21	2	Leeward Is. (West Indies)....	.10	.15	.17	3	Swaziland.....	.10	.15	.21	5
Chile.....	.10	.15	.17		Lesotho.....	.10	.15	.21	5	Sweden.....	.10	.15	.21	
China (Taiwan).....	.10	.15	.21	3	Liberia.....	.10	.15	.21	5	Switzerland.....	.10	.15	.21	2
China (Mainland).....	.10	.15	.21	3	Libya.....	.10	.15	.21	2	Syria.....	.10	.15	.21	3
Colombia.....	.10	.15	.17	3	Liechtenstein.....	.10	.15	.21	2	Tanzania.....	.10	.15	.21	4
Comoro Is. (France)....	.10	.15	.21	3	Luxembourg.....	.10	.15	.21	2	Tasmania (Australia)....	.10	.15	.21	4
Congo (Brazzaville)....	.10	.15	.21	2	Macao (Portugal)....	.10	.15	.21	3	Thailand.....	.10	.15	.21	3
Congo (Kinshasa)....	.10	.15	.21	2	Madeira Is. (Portugal)....	.10	.15	.21	2	Timor (Portugal)....	.10	.15	.21	4
Cook Is. (New Zealand)....	.10	.15	.21	3	Malagasy Republic (Madagascar)	.10	.15	.21	3	Togo.....	.10	.15	.21	2
Corsica (France).....	.10	.15	.21	2	Malawi.....	.10	.15	.21	6	Tonga Is. (Great Britain)....	.10	.15	.21	3
Costa Rica.....	.10	.15	.17	2	Maldives Is.....	.10	.15	.21	5	Trinidad and Tobago Is. (British)....	.10	.15	.17	2
Cuba.....	.10	.15	.17	4	Mali Republic.....	.10	.15	.21	2	Tristan de Cunha & Gough Is....	.10	.15	.21	3
Cyprus.....	.10	.15	.21	4	Malta (Great Britain)....	.10	.15	.21	2	Tunisia.....	.10	.15	.21	2
Czechoslovakia.....	.10	.15	.21	2	Martinique (France)....	.10	.15	.17	2	Turkey.....	.10	.15	.21	3
Dahomey.....	.10	.15	.21	2	Mauritania.....	.10	.15	.21	2	Turks & Caicos Is. (Great Britain)....	.10	.15	.17	2
Denmark.....	.10	.15	.21	2	Mauritius (Great Britain)....	.10	.15	.21	3	Uganda.....	.10	.15	.21	4
Dominican Republic.....	.10	.15	.17	2	Mexico.....	.06	.08	.11*	2	United States of America - Domestic rates only.....	.06	.08	.11*	
Ecuador.....	.10	.15	.17	3	Morocco.....	.10	.15	.21	2	U. S. S. R.....	.10	.15	.21	
Egypt (United Arab Republic)....	.10	.15	.21	2	Mozambique (Portugal)....	.10	.15	.21	3	Upper Volta.....	.10	.15	.21	2
El Salvador.....	.10	.15	.17	2	Muscat and Oman.....	.10	.15	.21	4	Uruguay.....	.10	.15	.17	2
Ethiopia.....	.10	.15	.21	3	Nauru Is.....	.10	.15	.21	4	Vatican City.....	.10	.15	.21	2
Faeroe Is. (Denmark).....	.10	.15	.21	2	Nepal.....	.10	.15	.21	5	Venezuela.....	.10	.15	.17	2
Falkland Is. (Great Britain)....	.10	.15	.17	3	Netherlands.....	.10	.15	.21	2	Vietnam.....	.10	.15	.21	2
Fiji Is. (Great Britain)....	.10	.15	.21	4	Netherlands Antilles.....	.10	.15	.17	1	Virgin Is. (Great Britain)....	.10	.15	.17	2
Finland.....	.10	.15	.21	2	New Caledonia (France)....	.10	.15	.21	2	West Irian (Indonesia)....	.10	.15	.21	3
France.....	.10	.15	.21	2	New Guinea, N.E. (Australia)....	.10	.15	.21	3	Windward Is. (West Indies)....	.10	.15	.17	2
French Polynesia Is.....	.10	.15	.21	2	New Hebrides Is.....	.10	.15	.21	2	Yemen.....	.10	.15	.21	
French Somaliland (Afars and Issas)....	.10	.15	.21	2	New Zealand.....	.10	.15	.21	3	Yugoslavia.....	.10	.15	.21	3
Gabon Republic.....	.10	.15	.21	2	Nicaragua.....	.10	.15	.17	4	Zambia.....	.10	.15	.21	
Gambia.....	.10	.15	.21	4	Niger.....	.10	.15	.21	2	Zanzibar.....	.10	.15	.21	4
Germany, Western Zone.....	.10	.15	.21	2	Nigeria.....	.10	.15	.21	3					
Germany, Eastern Zone.....	.10	.15	.21	2	Northern Ireland.....	.10	.15	.21	2					
Ghana.....	.10	.15	.21	3	Norway.....	.10	.15	.21	2					
Gibraltar (Great Britain)....	.10	.15	.21	2										
Gilbert and Ellice Is.....	.10	.15	.21	5										

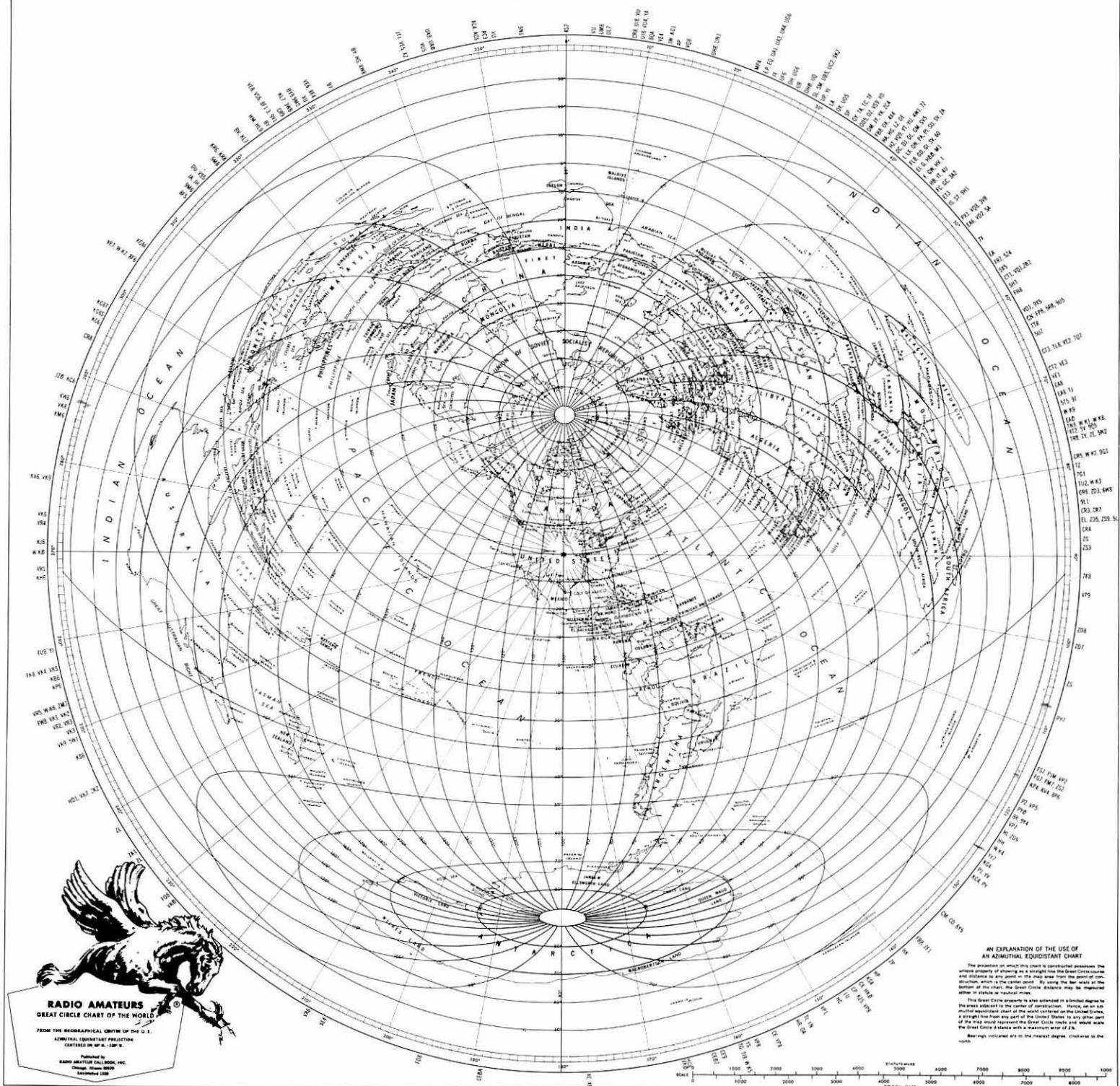
THE GEOGRAPHICAL CENTER OF THE

United States

The table below shows the great circle bearing in degrees and the distance in statute miles, from the point indicated above to countries throughout the world having licensed radio amateurs.

PREFIX	COUNTRY	BEARING	MILES	PREFIX	COUNTRY	BEARING	MILES	PREFIX	COUNTRY	BEARING	MILES
A2C, Z59	BOTSWANA, MAPEKING	90	9229	KR6, 8	RYUKYU IS (OKINAWA)	318	6873	VP8, LU-2	SOUTH GEORGIA IS	146	7507
AC3	SIRKIM, GANGTOK	351	7773	KS4	SWAN IS	144	1866	VP8, LU-2	SOUTH GRKNEY IS	155	7647
AC4	TIBET, LHASA	350	7550	K54B, HK0	SERRANA BANK & RONCADOR CAY	140	2177	VP8, LU-2	SCOTH SANDWICH IS	146	7980
AC5	BHUTAN	350	7764	KS6	AMERICAN SAMOA	247	5880	VP8, LU-2	SOUTH SHETLAND IS	159	7515
AP	EAST PAKISTAN, DACC	350	7969	KV4	VIRGIN IS, CHARLOTTE AMALIE	116	2588	VP9	BERMUDA IS, HAMILTON	95	2027
AP	WEST PAKISTAN, KARACHI	13	7872	KW6	WAKE IS	287	5536	VQ1	ZANZIBAR	58	8990
BV	TAIWAN (FORMOSA), TAIPEI	322	7228	KX6	MARSHALL IS	278	5925	VQ9	CHAGOS IS	14	10041
BY	CHINA, PEKING	333	6461	KZ5	CANAL ZONE, COLON	145	2482	VQ9	SEYCHELLES IS	38	9603
C21, VK9	REP. OF NAURU	272	6379	LA, LF, LJ	NORWAY, OSLO	31	4507	VR1	BRITISH PHOENIX IS	266	6293
C31, PX	ANDORRA, ANDORRA	50	4928	LU	ARGENTINA, BUENOS AIRES	147	5846	VR1	GILBERT, ELLICE & OCEAN IS	264	6135
CE	CHILE, SANTIAGO	155	5388	LX	LUXEMBOURG, LUXEMBOURG	41	4778	VR2	FIJI IS, SUVA	251	6609
CE9	S. SHETLAND IS	159	7496	LZ	BULGARIA, SOFIA	38	5694	VR3	FANNING & CHRISTMAS IS	252	4424
CE0A	EASTER IS	189	4677	M1, 9A1	SAN MARINO, SAN MARINO	43	5263	VR4	SOLOMON IS	271	7157
CE0X	SAN FELIX IS	161	4752	MP48	BAHRAIN IS	27	7514	VR5	TONGA IS, NUKUALOFA	244	6403
CE0Z	JUAN FERNANDEZ	163	5217	MP4D	DAS IS	26	7626	VR6	PITCAIRN IS	209	4898
CM, CO	CUBA, HAVANA	133	1586	MP4M	MUSCAT & OMAN, MASQAT	21	7817	VS5	BRUNEI	316	8616
CN2, 8, 9	MOROCCO, CASABLANCA	62	4863	MP4Q	QATAR	28	7578	VS6	HNG KCGN	326	7625
CP	BOLIVIA, LA PAZ	145	4396	MP4T	TRUCIAL STATES	25	7713	VS9A, P, S	SCUTH YEMEN, ADEN	39	8148
CR3	PORTUGUESE GUINEA, BISSAU	84	5383	QA1	PERU, LIMA	153	3897	VS9K	KAMARAN IS	40	7961
CR4	CAPE VERDE IS	86	4790	OD5	LEBANON, BEIRUT	36	6579	VU	INDIA, CALCUTTA	352	8055
CR5	PRINCIPE & SAO TOME IS	78	7079	OE	AUSTRIA, VIENNA	38	5210	VU4	LAGCADDIE IS	9	8957
CR6	ANGOLA, NOVA LISBOA	83	8177	OH	FINLAND, HELSINKI	26	4859	VU5	ANDAMAN & NICOBAR IS	344	8750
CR7	MOZAMBIQUE, LOURENCO MARQUES	85	9599	OH0	ALAND IS	28	4740	XE, XF, 4A	MEXICO, MEXICO CITY	177	1461
CR8	PORTUGUESE TIMOR	294	8899	QK, OL	CZECHOSLOVAKIA, PRAGUE	38	5048	XE4	REVILLAGIGEDO IS	207	1597
CR9	MACAO	326	7625	ON	BELGIUM, BRUSSELS	41	4666	XT2, FF8	UPPER VLTVA, OUAGADOUOU	76	6112
CT1	PORTUGAL, LISBON	58	4621	OX, XP	GREENLAND, GODTHAB	33	2531	XU	CAMBODIA, PHNUM PENH	330	8503
CT2	AZORES IS	67	3764	OY	FAEROES IS, TORSHAVN	34	3921	XW8	LAOS, VIENTIANE	335	8165
CT3	MADEIRA IS	67	4473	OZ	DENMARK, COPENHAGEN	34	4740	XZ2	BURMA, RANGOON	342	8367
CX	URUGUAY, MONTEVIDEO	145	5906	PA, PE, PI	NETHERLANDS, AMSTERDAM	40	4659	YA	AFGHANISTAN, KANDAHAR	13	7373
DC, DJ-L	W. GERMAN FEDERAL REP., BONN	40	4770	PJ2	NETH. ANTILLES, CURACAO	127	2714	YB-D, 8F, PK	INDONESIA, DJAKARTA	317	9554
DM	E. GERMAN DEM. REP., BERLIN	36	4876	PJ3, 9	NETH. ANTILLES, ARUBA	127	2618	YI	IRQ, BAGHDAD	30	6898
DU	PHILIPPINES, MANILA	316	7813	PJ4, 9	NETH. ANTILLES, BONAIRE	126	2756	YJ, FU8	NEW HEBRIDES, VILA	257	7117
EA	SPAIN, MADRID	54	4801	PJ5	NETH. ANTILLES, ST. EUSTATIUS	115	2731	YK	SYRIA, DAMASCUS	36	6668
EA6	BALEARIC IS	52	5139	PJ6	NETH. ANTILLES, SABA	114	2684	YN, HT	NICARAGUA, MANAGUA	152	2126
EA8	CANARY IS	71	4765	PJ7	NETH. ANTILLES, SINT MAARTEN	114	2684	YO	RGMANIA, BUCHAREST	36	5736
EA9	CEUTA & MELILLA	58	4919	PY	BRAZIL, BRASILIA	128	5125	YS	EL SALVADOR, SAN SALVADOR	156	1927
EA9	SPANISH SAHARA (RIO DE ORO)	73	5029	PY7	FERNANDO DE NORONHA	108	5266	YU, YT	YUGOSLAVIA, BELGRADE	38	5491
EI	IRELAND, DUBLIN	43	4234	PY0	TRINADAE & MARTIM VAS IS	118	6223	YV	VENEZUELA, CARACAS	127	2907
EL, 5L	LIBERIA, MONROVIA	71	7050	PZ	SURINAM, PARAMARIBO	118	3654	YV0	AVES IS	125	2800
EP	IRAN, TEHRAN	24	6939	SK, SL, SM	SWEDEN, STOCKHOLM	29	4738	ZA	ALBANIA, TIRANA	41	5696
ET3	ETHIOPIA, ADDIS ABABA	47	8166	SP, 3Z	POLAND, WARSAW	33	5165	ZB2	GIBRALTAR	53	5357
F	FRANCE, PARIS	44	4677	ST	SUDAN, KHARTOUM	48	7537	ZC4, 5B4	CYPRUS, NICOSIA	37	6458
FB8, FB8	AMSTERDAM & ST. PAUL IS	36	12273	SU	Egypt, CAIRO	41	6676	ZD3	GAMBIA, BATHURST	84	5287
FB8W	CROZET IS	115	10991	SV	GREECE, ATHENS	41	5993	ZD5, ZST	SWAZILAND, MBABANE	86	9494
FB8X	KERGUELEN IS	143	11635	SV	CRETE	42	6189	ZD7	ST. HELENA IS	92	7776
FC	CORSICA	46	5244	SV5	DODECANESE IS	40	6204	ZD8	ASCENSION IS	99	6376
FG7	GUADELOUPE IS	115	2827	TA, TC	TURKEY, ANKARA	34	6171	ZD9	TRISTAN DA CUNHA & DOUGH IS	121	7716
FH8, FB8	CCMORO IS	60	9482	TF	ICELAND, REYKJAVIK	34	3431	ZE	RHODESIA, SALISBURY	77	9174
FK8	NEW CALEDONIA, NOUMEA	255	7389	TG	GUATEMALA, GUATEMALA CITY	158	1840	ZF1, VP5	CAYMAN IS	135	1886
FL8	FRENCH SVALILAND, DJIBOUTI	42	8139	TI	COSTA RICA, SAN JOSE	150	2305	ZK1	CGDR IS	234	5582
FM7	MARTINIQUE	115	2923	TI9	COCOS IS	156	2582	ZK1	MANIHIKI IS	242	5159
FO8	FRENCH POLYNESIA, TAHITI	228	5104	TIJ, FE8	CAMEROON, YAOUNDE	72	7195	ZK2	NIUE IS	243	6071
FP8	CLIPPERTON IS	197	2153	TL8, FQ8	CENTRAL AFRICAN REP., BANGUI	67	7542	ZL	NEW ZEALAND, AUCKLAND	238	7572
FR7	ST. PIERRE & MIQUELON IS	63	2231	TN8, FQ8	CONGO REPUBLIC, BRAZZAVILLE	76	7721	ZL	AUCKLAND & CAMPBELL IS	228	8455
FR7	GLORIOSO IS	54	9606	TR8, FQ8	GABON REPUBLIC, LIBREVILLE	77	7228	ZL	CHATHAM IS	228	7528
FR7	JUAN DE NOVA	65	9729	TT8, FQ8	CHAD REPUBLIC, FORT-LAMY	64	6957	ZL	KERMADEC IS	239	6955
FR7	REUNION IS, SAINT-DENIS	55	10477	TU2, FF4	IVORY COAST, ABIDJAN	82	6324	ZM7	TCHELUA IS	251	5693
FR7	TROMELIN	50	10170	TY, FF8	DAHOMEY REP., PORTO NOVO	77	6643	ZP	PARAGUAY, ASUNCION	141	5256
FS7	SAIN MARTIN IS	114	2684	TZ, FF8	MALI REPUBLIC, BAMAKO	79	5758	ZS1, 2, 4-6	OUTH AFRICA, CAPE TOWN	104	9076
FU8, YJ	NEW HEBRIDES, VILA	257	7117	UA, K, V, W	EUROPEAN RUSS.S.F.S.R., MOSCOW	22	5364	ZS2	PRINCE EDWARD & MARION IS	117	10323
FW8	WALLIS & FUTUNA IS	251	6176	JA1, UK	FRANZ JOSEF LAND	4	4022	ZS3	S.W. AFRICA (NAMIBIA), WINDHOEK	92	8641
FY7	FRENCH GUIANA, CAYENNE	36	8955	KA1, UK	KALININGRADSK	31	4986	ZA	MUNACO	46	5077
G	ENGLAND, LONDON	43	4524	UA, K, V, W	ASIATIC RUSSIAN S.F.S.R.	358	5870	ZB6, VQ8	AGALEGA IS	40	9939
GC	GUERNSEY & DEPENDENCIES	46	4527	UB, K, T5, Y	UKRAINIAN S.S.R.	29	5630	ZB8, VQ8	MURITIUS IS	49	10550
GC	JERSEY IS	46	4527	UC2, UK	WHITE RUSSIAN S.S.R.	28	5250	ZB9, VQ8	RODRIGUEZ IS	41	10738
GD	ISLE OF MAN, DOUGLAS	42	4271	UD6, UK	AZERBAIDZHN S.S.R.	25	6535	3C, EA8	EQUATORIAL GUINEA, BATA	75	7187
GI	NORTHERN IRELAND, BELFAST	41	4167	UF6, UK	GEORGIAN S.S.R.	26	6342	3V8	TUNISIA, TUNIS	50	5517
GM	SCOTLAND, GLASGOW	40	4202	UG6, UK	ARMENIAN S.S.R.	27	6442	3W8, XV5	S. VIETNAM, SAIGON	328	8512
GW	WALES, CARDIFF	44	4415	UH8, UK	TURKMEN S.S.R.	15	6770	5A	CEYLON, COLOMBO	0	9193
HA, HG	HUNGARY, BUDAPEST	38	5357	UI8, UK	UZBEK S.S.R.	12	6752	5C4, F8	CEYLAN, COLOMBO	0	9193
HB	SWITZERLAND, BERN	43	4944	UJ8, UK	TADZHIN S.S.R.	7	6950	4W1, 3	YEMEN, SANAA	39	7995
HB, HE	LIECHTENSTEIN, VADUZ	42	5052	UL7, UK	KAZAKH S.S.R.	8	6131	4X4, 4Z4	ISRAEL, TEL AVIV	37	6695
HC	ECUADOR, QUITO	148	3104	UM8, UK	KIRGHIZ S.S.R.	4	6832	5A	LIBYA, TRIPOLI	51	5832
HC8	GALAPAGOS IS	165	2846	UO5, UK	MOLDAVIAN S.S.R.	32	5660	5H3, VQ3	TANGANYIKA, DAR-ES-SALAAM	59	9042
HH	HAITI, PORT-AU-PRINCE	123	2216	UP2, UK	LITHUANIAN S.S.R.	29	5042	5N2, ZD2	NIGERIA, LAGOS	77	6643
HI	DOMINICAN REP., SANTO DOMINGO	122	2356	UQ2, UK	LATVIAN S.S.R.	28	5015	5R8, F88	MALAGASY REP., TANANARIVE	62	10061
HK	COLOMBIA, BOGOTA	140	2981	UR2, UK	ESTONIAN S.S.R.	26	4911	5T5, F77	MAURITANIA, NOUAKCHOTT	80	5126
HK0	MALPELO IS	151	2741	VE1	CANADA, HALIFAX	67	1855	5U7, FF8	NIGER, NIAMEY	72	6224
HK0	SAN ANDRES & PROVIDENCIA IS	143	2205	VE2	CANADA, MONTREAL	64	1374	5V5, VP5	JAMAICA, KINGSTON	131	2058
HM, HL9	KOREA, SEOUL	325	6280	VE3	CANADA, TORONTO	69	1113	5W1, ZM6	WESTERN SAMOA, APIA	248	5929
HP	PANAMA, PANAMA	145	2482	VE4	CANADA, WINNIPEG	69	1113	5W1, ZM6	WESTERN SAMOA, APIA	248	5929
HR	HONDURAS, TEGUCIGALPA	153	1972	VE5	CANADA, SASKATOON	341	888	5V5, VP5	UGANDA, KAMPALA	60	8359
HS	THAILAND, BANGKOK	336	8470	VE6	CANADA, EDMONTON	332	1134	5X5, VQ5	UGANDA, ACRA	79	6487
HV	VATICAN CITY	45	5358	VE7	CANADA, VANCOUVER	306	1279	5Y6, FF8	KENYA, NAIROBI	56	8636
HZ, TZ	SAUDI ARABIA, MECCA	39	7444	VE8	CANADA, WHITEHORSE	326	2063	5Z1, VQ5	SENEGAL REP., DAKAR	83	5201
I, IRB	ITALY, ROME	45	5358	VK, AX	AUSTRALIA, BRISBANE	258	2857	6T1, 3X	TAJIKISTAN, KUNGBOT	131	2058
IS	SARDINIA	48	5337	VK2	LORD HOWE IS	250	8138	6T8, ZS8	LESOTHO, MASERU	93	9387
IT	SICILY	47	5676	VK7	TASMANIA IS, HOBART	243	9060	7Q7, ZD6	MALAWI, BLANTYRE	71	9289
JA, JH, JR	JAPAN, TOKYO	315	5947	VK9AA-MZ	PAPUA & NEW GUINEA TERR.	278	7834	7X, FA	ALGERIA, ALGIERS	53	5227
JD	OGASAWARA IS (BONIN)	308	6330	VK9N	NORFOLK IS	315	9824	7Z2, HZ	SAUDI ARABIA, MECCA	39	7504
JD1	MINAMI-TORI-SHIMA IS (MARGUS)	298	5946	VK9X	CHRISTMAS IS	327</td					

RADIO AMATEURS GREAT CIRCLE CHART OF THE WORLD FROM THE GEOGRAPHICAL CENTER OF THE UNITED STATES



This map available in 4 colors, size 30" x 25". See inside front cover and page 19.

Z-CODE FOR POINT-TO-POINT SERVICE

Asterisk indicates U. S. Military Usage

NOTE: Numbers 1-5 following the "Z" signal mean:

1. Very slight
2. Slight
3. Moderate
4. Severe
5. Extreme

- A -

*ZAA YOU ARE NOT OBSERVING CIRCUIT DISCIPLINE.
*ZAB YOUR SPEED KEY IMPROPERLY ADJUSTED.
*ZAC Advise (Call sign of) frequency you are reading.
*ZAD Cease using speed key.
*ZAE Signal (1) Not understood (2) Not held.
*ZAF Unable to receive you, try via _____.
*ZAH Reroute the circuit by patching.
*ZAI Unable to relay. We file.
*ZAI Run (foxes, RY's, mk, etc.)
*ZAJ Have been unable to break you.
*ZAL Alter your wave-length.
*ZAL Closing down, due to _____.
*ZAN WE CAN RECEIVE ABSOLUTELY NOTHING.
*ZAN Transmit only msgs of above precedence _____.
*ZAO CAN'T UNDERSTAND VOICE. USE TELEGRAPH.
*ZAP ACKNOWLEDGE, PLEASE.
*ZAP Work (simplex, duplex, mux, sb).
*ZAQ Last word received (sent) was _____.
*ZAR Revert to Automatic Relay.
*ZAS Rerun tapes run on _____ since _____.
*ZAT Punching tape for transmission.
*ZAV Send blind until advised.
*ZAY Send on (kcs). Will confirm later.
*ZAX You are causing interference.

- B -

*ZBA Cause of delay is _____.
*ZBD Following was sent (time).
*ZBE Retransmit message _____ to _____.
*ZBG You are sending upper case.
*ZBH Make call before transmitting traffic.
*ZBI Listen for telephony.
*ZBL Do not use break-in.
*ZBM Put _____ (speed opr.) this frequency.
*ZBN Break and go ahead with New slip.
*ZBN Your tape reversed.
*ZBO I HAVE TRAFFIC.
*ZBP (1) Characters indistinct (2) Spacing bad.
*ZBQ When & on what frequency was message received.
*ZBR Break circuit. Retuning.
*ZBR Shall I send by (method).
*ZBS Blurring Signals (1) Dots heavy (2) Dots light.
*ZBT Count _____ as _____ groups.
*ZBU Report when in communication with _____.
*ZBV Answer on _____ mc.
*ZBW I shift (or ask _____) to (kcs).
*ZBY Pull Back your tape one Yard.

- C -

*ZCA Circuit Affected. Make readable signals.
*ZCB Circuit Broken. Signal unheard.
*ZCC Collate Code.
*ZCD Your Collation is Different.
*ZCF CHECK YOUR CENTER FREQUENCY, PLEASE.
*ZCI Circuit Interrupted. Running & available.
*ZCK Check Keying.
*ZCL TRANSMIT CALL LETTERS INTELLIGIBLY.
*ZCO Your Collation Omitted.
*ZCP Conditions Poor, increase to maximum.
*ZCR Using concentrator. Make warning signals.
*ZCS Cease Sending.
*ZCT Send Code Twice.
*ZCW Are you in direct Communication With _____?

- D -

*ZDA Hr. formal message, priority _____.
*ZDB Expedite reply to my _____.
*ZDC Diagnosing Circuit faults, will advise.
*ZDE Message undelivered. (1) Will keep trying.
(2) Advise disposal (3) Cancelling (4) Btr. ads.
*ZDE Message _____ undelivered.
*ZDF Frequency is Drifting to degree indicated, 1-5.
*ZDF Message _____ received by addressee (time).
*ZDG Accuracy of following doubtful.
*ZDH Your Dots are too Heavy (long).
*ZDL Your Dots are too Light (short).
*ZDM Your Dots Missing.
*ZDM This is a multiple-address message.
*ZDN Report disposal of message _____.
*ZDQ Message _____ relayed to _____ at _____ by _____.
*ZDS Msg just trans erroneous. Correct version is _____.
*ZDT Following Transmitters running Dual.
*ZDT Don't Transmit exercise messages until advised.
*ZDV Your Dots Varying length, please remedy.
*ZDV Private message received for _____. Advise.
*ZDY No private messages until ordered.

- E -

*ZEC Have you received message _____.
*ZED Experiencing Drop-outs, 1-5.
*ZEF We are Experiencing Fill-ins, 1-5.
*ZEG We are Experiencing Garbles, 1-5.
*ZEI Accuracy of heading doubtful.
*ZEK No answer required.
*ZEL This message is correction to _____.
*ZEN This message is classified.
*ZEP Parts marked ZEP coming later.
*ZEU Exercise (drill message).

- F -

ZFA Failing Auto.
*ZFA Message intercepted or copied blind.
ZFB SIGNALS ARE FADING BADLY.
*ZFB Pass this message to _____.
ZFC Check your FSK shift, please.
ZFD Depth of Fading is as indicated, 1-5.
*ZFD This message is a suspected duplicate.
*ZFF Advise when message received by _____.
*ZFH Message for (1) Action, (2) Info, (3) Comment.
*ZFI Reply to message? There is no reply.
ZFK Revert to FSK.
ZFO SIGNALS FADED OUT.
ZFO/x Frequency shift your signal is _____ cps.
ZFR Rapidity of Fading is as indicated, 1-5.
*ZFR Cancel transmission _____.
ZFS Signals are Fading Slightly.
- G -

*ZGB Send (Answer).
ZGF _____ signals Good For _____ wpm.
*ZGF Make call signs more distinctly.
ZGP Please Give Priority.
ZGS YOUR SIGNALS GETTING STRONGER.
ZGW YOUR SIGNALS GETTING WEAKER.
- H -

ZHA How are conditions for Auto reception?
ZHC HOW ARE YOUR RECEIVING CONDITIONS?
ZHM/x Harmonic radiation from transmitter.
ZHS Send High Speed auto _____ wpm.
ZHY We are Holding Your _____.

- I -

ZIM Industrial or Medical interference, 1-5.
ZIP Increase Power.
ZIR You have strong Idle Radiation.
ZIS Atmospheric Interference, 1-5.
- J -

ZJF Frequency Jumping to degree indicated, 1-5.
- K -

*ZKA Who is controlling station? or I am _____.
*ZKB Permission necessary before transmitting msgs.
*ZKD Take control of net _____ or shall I _____.
*ZKE I (or _____) reports into circuit (net).
*ZKF Station leaves net temporarily.
*ZKJ Closing down (until _____.)
*ZKO REVERT TO ON/OFF KEYING.
*ZKQ Say when ready to resume.
*ZKS What Stations Keeping watch on _____?
ZKW Keying Weight is _____ (percent).
- L -

ZLB Give Long Breaks, please.
ZLD We are getting Long Dash from you.
ZLL Distorted LandLine control signals.
ZLP Low (minimum) Power.
ZLS WE ARE SUFFERING FROM LIGHTNING STORM.

- M -

ZMG Magnetic activity.
ZMO STAND BY MOMENT.
ZMP MisPunch or Perforator failures.
ZMQ Stand by for _____.
ZMU/x Multipath making _____ mark bias.

- N -

ZNB No Breaks, we send twice.
*ZNB Authentication is _____.
ZNC NO COMMUNICATIONS WITH _____.
*ZNC All stations authenticate.
*ZND You are misusing authenticator.
ZNG Receiving conditions No Good for code.
ZNI NO CALL LETTERS (IDENTIFICATION) HEARD.
ZNN ALL CLEAR OF TRAFFIC.
ZNO Not on the air.
ZNR Not Received.
ZNS Here New Slip.

- O -

*ZOA Have checked (call-letters) _____ OK.
*ZOC Relay to your sub-stations.
*ZOD Observing _____ will transfer when better.
*ZOE Act as radio link between me and _____.
*ZOF Can you accept message? (or) Give me message.
*ZOG Relay this message.
*ZOH Transmit your message (give info.).
*ZOK What traffic have you On Hand?
WE ARE RECEIVING OK.
*ZOK Relay this message via _____.
*ZOL QK. On Line.
*ZOM Mail delivery permissible.
*ZOR Transmit Only Reversals.
*ZOU Give instructions for routing traffic.
*ZOZ Obtain retransmission of message _____.

- P -

ZPA Printer line Advance not received.
*ZPA Your speech distorted.
ZPC Printer Carriage-return not received.
*ZPC Signals fading, 1-5.
ZPE Punch Everything.
ZPF Printer motor Fast.
ZPO Send Plain Once.
ZPP Punch Plain only.
ZPR Rerun slip at Present Running.
ZPS Printer motor Slow.
ZPT Send Plain Twice.

- R -

ZRA Reverse Auto tape.
*ZRA Mr frequency OK? Your frequency is _____.
ZRB Relayed signal Bad, adjust receiver.
*ZRB Check your frequency on this circuit.
ZRC Can you Receive Code?

*ZRC Shall I, or tune your transmitter to _____.
*ZRE Hear you best on (kcs).

*ZRF Send tuning signals on present frequency.

ZRK Reversed Keying.

ZRL Rerun slip before one now running.

ZRM Please Remove Modulation from _____.
I receive (usb, lsb, isb's)

ZRN ROUGH NOTE.

ZRO ARE YOU RECEIVING OK?

ZRR Run Reversals.

ZRS Rerun message No. _____.
Revert to Traffic.

ZRY Run test slip, please.

- S -

ZSF SEND FASTER.
ZSH STATIC HEAVY HERE.
ZSI/x Please furnish Signal Intensity.
ZSM/x Microvolt input to receiver is _____.
ZSN Give SINPO report on _____ S Signal strength.
I Interference.
N Noise.
P Propagation.
O Overall readability.

ZSO Transmit Slips Once.

ZSR YOUR SIGNALS STRONG & READABLE.

ZSS Send Slower.

ZST Transmit Slips Twice.

ZSU YOUR SIGNALS ARE UNREADABLE.

ZSV Your Speed Varying.

- T -

ZTA Transmit by Auto.

ZTH Transmit by Hand.

ZTI Transmission temporarily Interrupted.

- U -

ZUA Conditions Unsuitable for Automatic recording.

*ZUA Timing signal will be transmitted.

ZUB WE HAVE BEEN UNABLE TO BREAK YOU.

ZUC UNABLE TO COMPLY. WILL DO SO AT _____

*ZUE Affirmative (Yes).

*ZUG Negative (No).

*ZUH Unable to comply.

*ZUJ Wait. Stand by.

- V -

ZVB Varying Bias.

ZVF Signals Varying in Frequency.

ZVP Send V's Please.

*ZVR Pass at once to sub-stations.

ZVS Signals Varying in intensity.

- W -

*ZWB Name of operator on watch.

ZWC Wipers or Clicks here.

ZWO SEND WORDS ONCE.

ZWR YOUR SIGNALS WEAK BUT READABLE.

ZWS Wavelength (frequency) is Swinging, 1-5.

ZWT SEND WORDS TWICE.

- Y -

ZYS WHAT IS YOUR SPEED OF TRANSMISSION?

- Z -

*ZZF Incorrect.

*ZZG You are correct.

*ZZH TRY AGAIN.

MULTIPLEX

ZYA Cease traffic; send A's on A channel.

ZYC Cycling on ARQ, errors stored your end.

ZYK Check Your Keying on channel _____.

ZYM Change from single printer to Multiplex.

ZYN Make bias Neutral.

ZYP Change from multiplex to single Printer.

ZYR Please put _____ on MUX revolutions.

ZYT Check Your Thyatrons.

ZYX/x Revert to MUX frames _____ channels.

RADIOPHOTO AND FACSIMILE

ZXA Adjust to receive speeds _____.

ZXC Pix Conditionally accepted.

ZXD Send Dashes, please.

ZXF You are Floating Fast.

ZXH Limits High, reduce _____ cycles.

ZXJ You are Jumping out of phase.

ZXK Is your synchronizing correct?

ZXL Limits are Low, increase _____ cycles.

ZXO Last run defaced due to _____.

ZXP Go ahead with Pix.

ZXS You are floating Slow.

ZXV Your modulation is Varying.

Sources: Cable and Wireless Ltd.
U. S. Army Communications Manual SIG 439-2.
ACP-131 (A), Allied Comms. Procedures.
W3AFM

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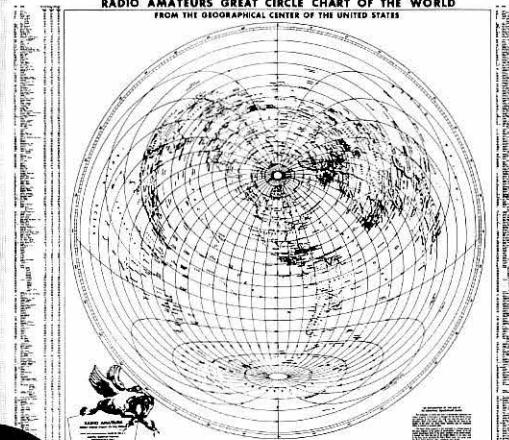
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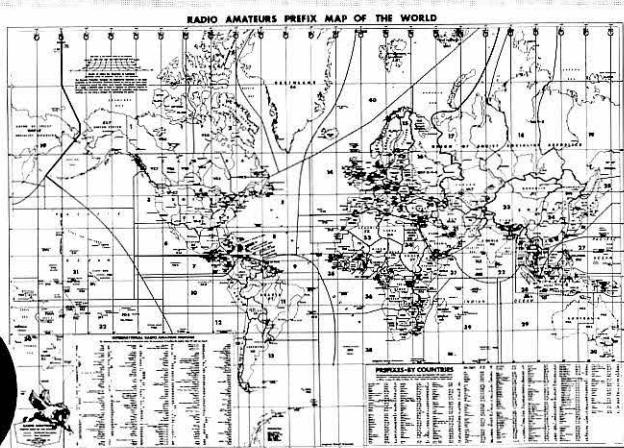


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STANDARD TIME THROUGHOUT THE WORLD

The standard time system is based on the theoretical division of the surface of the globe into 24 zones, each of 15° of longitude. The initial zone is the one which has as its central meridian the Greenwich Meridian and with the meridians 7° 30' E. and 7° 30' W. as its eastern and western limits. Time in this zone is called Greenwich Mean Time, or GMT. Places to the east of Greenwich have faster time than Greenwich, while places to the west have slower time. Not all countries follow the International Time Zone System, but some use the time of some principal city as a standard and others have no standard time.

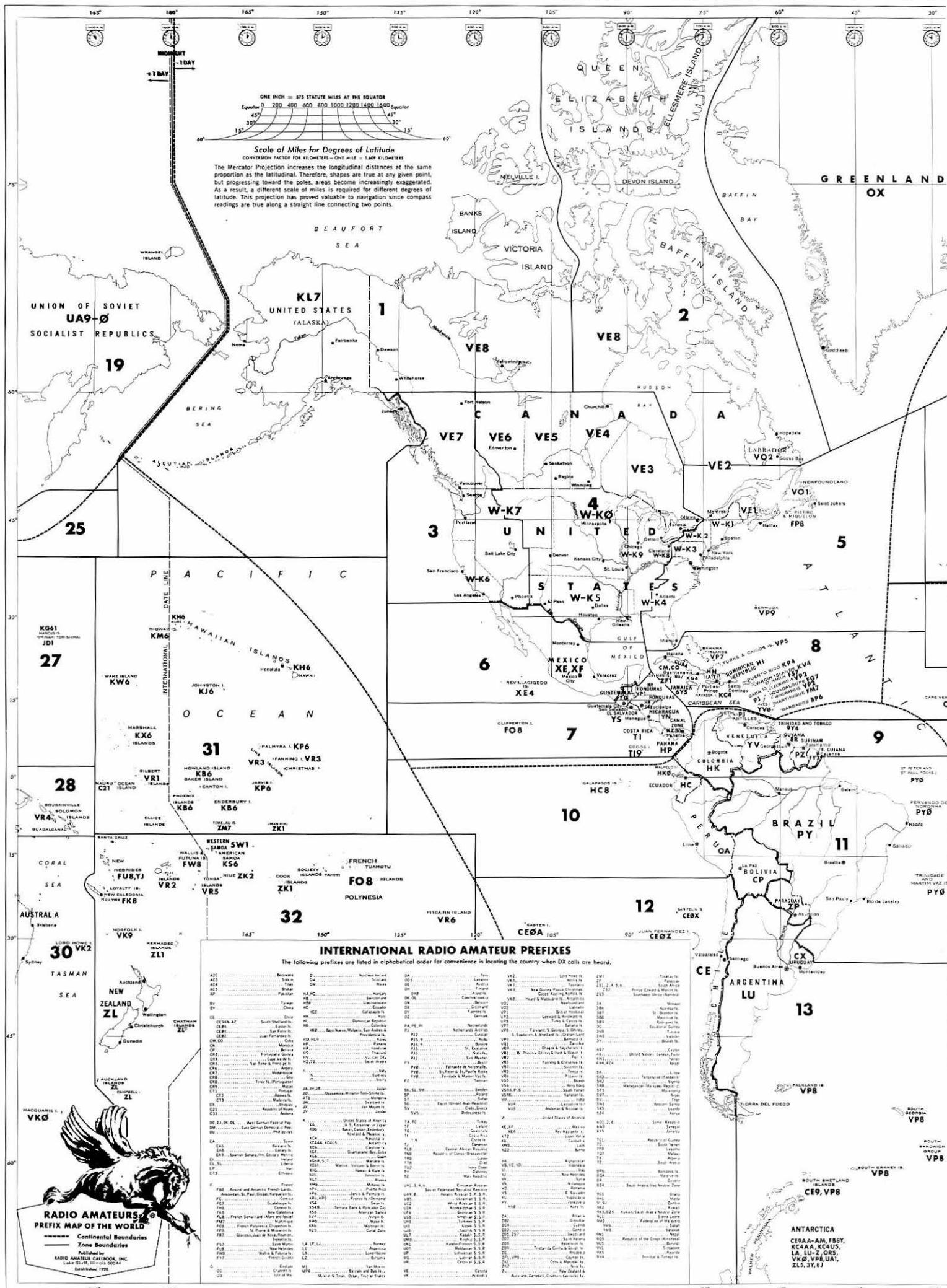
Reference - "Standard Time Chart of the World" No. 5192, published by U. S. Navy Hydrographic Office, Washington, D.C.

The theoretical system described is applied, in a strict sense, only in oceanic regions. On land or on groups of islands the system is applied with certain local deviations, which are rendered necessary by frontiers, convenience of an entire island group to maintain same zone time, etc. The time used in each country, whether it is the time of the corresponding zone or modified for reasons given, is an hour fixed by law and, for this reason, is called legal time, or more generally standard time.

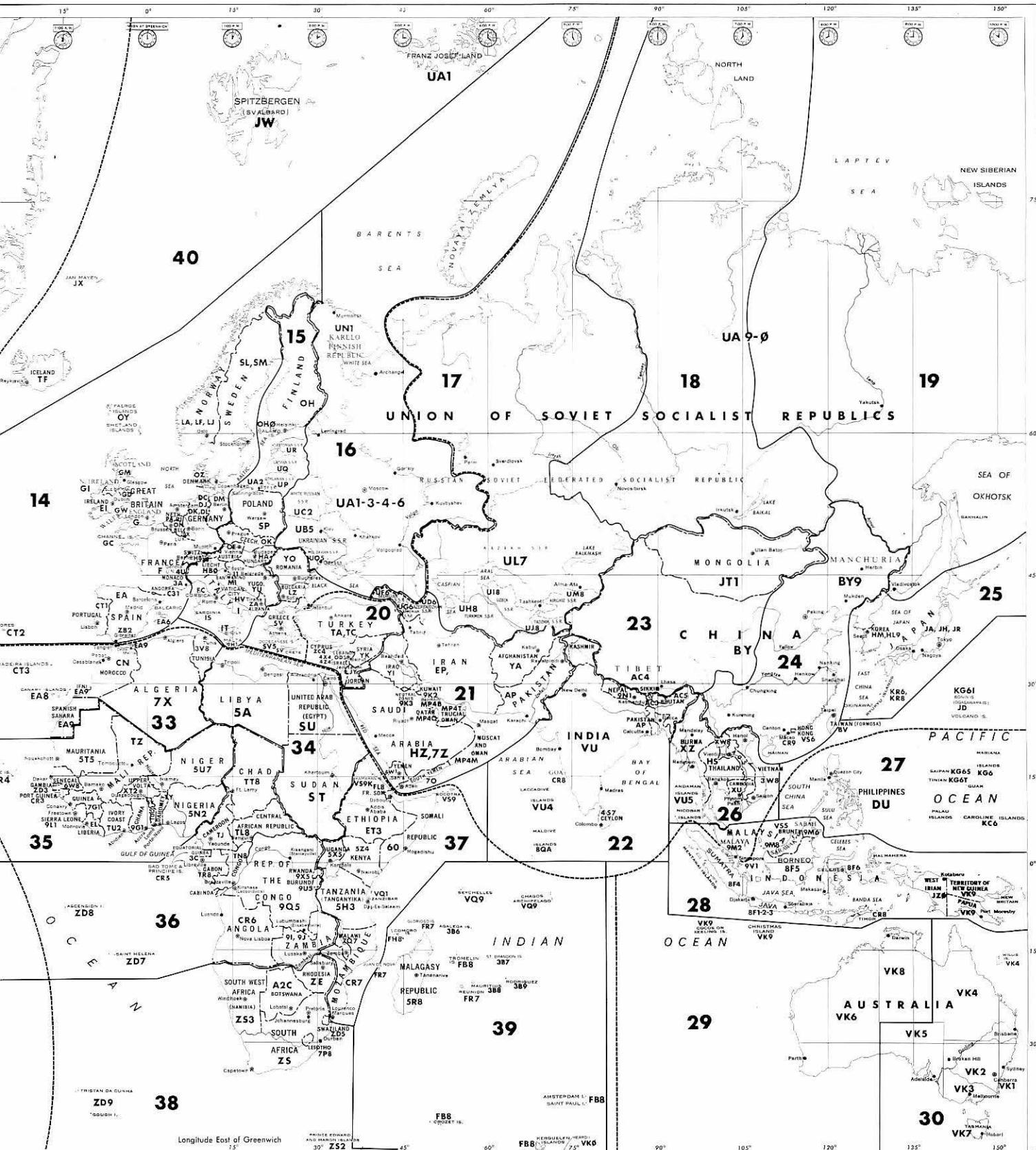
Another deviation from this theoretical system is that certain countries, for economic reasons, modify their legal time for part of the year, especially in summer, by advancing it an hour or another fraction of time. Where such deviations are maintained on a year-round basis, the time kept is considered to be standard time.

Country	Standard or Local Time	Country	Standard or Local Time	Country	Standard or Local Time
	Hours fast or slow of GMT		Hours fast or slow of GMT		Hours fast or slow of GMT
	Time at 1200 hrs. GMT		Time at 1200 hrs. GMT		Time at 1200 hrs. GMT
Aden, Kamran, Socotra Is.	+ 3	15 00	Faeroe Is.	0	12 00
Afghanistan	+ 4 1/2	16 30	Falkland Is.	- 4	08 00
Alaska, Juneau, Ketchikan, Sitka.	- 8	04 00	Fanning & Line Is.	- 10	02 00
Yakutat	- 9	03 00	Fiji Is.	+ 12	24 00
Central part, Kodiak Is.	- 10	02 00	Finland, Aland Is.	+ 2	14 00
West coast, Aleutian Is.	- 11	01 00	France, Corsica.	+ 1	13 00
Albania	+ 1	13 00	French Polynesia.	- 10	02 00
Algeria	+ 1	13 00	Gabon	+ 1	13 00
Amsterdam, St. Paul, Kerguelen Is.	+ 5	17 00	Gambia	0	12 00
Andorra	+ 1	13 00	Germany	+ 1	13 00
Angola	+ 1	13 00	Ghana	0	12 00
Argentina	- 4	08 00	Gibraltar	+ 1	13 00
Ascension Is., St. Helena Is.	0	12 00	Gilbert & Ellice Is.	+ 12	24 00
Australia, Western Australia	+ 8	20 00	Goa	+ 5 1/2	17 30
Northern Territory, South Australia	+ 9 1/2	21 30	Greece, Crete, Dodecanese Is.	+ 2	14 00
New South Wales, Queensland, Victoria, Lord Howe Is., Tasmania Is.	+ 10	22 00	Greenland, western	- 4	08 00
Austria	+ 1	13 00	Guantanamo Bay	- 5	07 00
Azores Is.	- 1	11 00	Guatemala	- 6	06 00
Bahama Is.	- 5	07 00	Guiana, British	- 3 3/4	08 15
Bahrain Is.	+ 4	16 00	Guiana, French	- 4	08 00
Baker, Canton, Enderbury, Howland & Phoenix Is.	- 11	01 00	Guinea, Portuguese	- 1	11 00
Basutoland	+ 2	14 00	Guinea, Republic of	0	12 00
Bechuanaland	+ 2	14 00	Haiti	- 5	07 00
Belgium	+ 1	13 00	Hawaii	- 10	02 00
Bennida Is.	- 4	08 00	Heard Is.	+ 5	17 00
Bhutan	+ 5 1/2	17 30	Honduras	- 6	06 00
Bolivia	- 4	08 00	Hong Kong	+ 8	20 00
Bonin, Volcano, Mariana, Saipan, Tinian, Guam Is.	+ 10	22 00	Hungary	+ 1	13 00
Brazil, Fernando Noronha, Trindade & Martin Vaz Is.	+ 7 1/2	19 30	Iceland	- 1	11 00
East of 52°30' W (approx)	- 3	09 00	Ilini	0	12 00
Amazonas, Matto Grosso	- 4	08 00	India, Andaman & Nicobar, Laccadive Is.	+ 5 1/2	17 30
Acре Territory	- 5	07 00	Iran	+ 3 1/2	15 30
British Honduras	- 5 1/2	06 30	Iraq	+ 3	15 00
British Isles	+ 1	13 00	Ireland	+ 1	13 00
British Phoenix Is.	- 11	01 00	Israel	+ 2	14 00
Brunei	+ 8	20 00	Italy, Sardinia, Sicily	+ 1	13 00
Bulgaria	+ 2	14 00	Ivory Coast	0	12 00
Burma	+ 6 1/2	18 30	Jamaica	- 5	07 00
Burundi	+ 2	14 00	Jan Mayen Is.	- 1	11 00
Cambodia	+ 7	19 00	Japan	+ 9	21 00
Cameroon	+ 1	13 00	Jarvis & Palmyra Is.	- 10	02 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	08 30	Java (Indonesia)	+ 7 1/2	19 30
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E of 68°W), Sabine Is., Melville Peninsula (east), Ontario (E of 90°W), Quebec (W of 68°W), Southampton Is., Manitoba, Ontario (W of 90°W), Melville Peninsula (west), N. W. Territories (east)	- 4	08 00	Johnston Is.	- 11	01 00
Alberta, Saskatchewan, N. W. Territories (middle)	- 7	05 00	Jordan	+ 2	14 00
British Columbia, N. W. Territories (west)	- 8	04 00	Kenya	+ 3	15 00
Yukon	- 9	03 00	Korea	+ 9	21 00
Arctic Is.*			Kuwait	+ 3	15 00
Canal Zone	- 5	07 00	Laos	+ 7	19 00
Canary Is.	0	12 00	Lebanon	+ 2	14 00
Cape Verde Is.	- 2	10 00	Liberia	- 3/4	11 15
Caroline Is., Western, Eastern	+ 9	21 00	Libya	+ 2	14 00
Cayman Is.	+ 11	23 00	Liechtenstein	+ 1	13 00
Celebes Is., (Indonesia)	- 5	07 00	Luxembourg	+ 1	13 00
Central African Republic	+ 8	20 00	Macao	+ 8	20 00
Ceylon Is.	+ 1	13 00	Macau	+ 11	23 00
Chad	+ 5 1/2	17 30	Madeira Is.	- 1	11 00
Chagos Is.	+ 1	13 00	Malagasy Republic (Madagascar Is.)	+ 3	15 00
Chatham Is.	+ 5	17 00	Malawi (Nyasaland)	+ 2	14 00
Chile, Juan Fernandez Is.	+ 12 3/4	00 45	Malaysia	+ 7 1/2	19 30
China, Western part	- 4	08 00	Maldives Is.	+ 5	17 00
Mid-western part	+ 5	17 00	Mali Republic	0	12 00
Mid-eastern part	+ 6	18 00	Malta Is.	+ 1	13 00
Eastern part	+ 7	19 00	Manchuria	+ 8	20 00
Christmas Is.	+ 7	19 00	Manihiki Is.	- 11	01 00
Clipperton Is.	- 7	05 00	Marshall Is., Wake Is.	+ 12	24 00
Cocos-Keeling Is.	+ 6 1/2	18 30	Mauritania	0	12 00
Colombia, San Andres & Providencia Is.	- 5	07 00	Mauritius & Rodriguez Is.	+ 4	16 00
Comoro Is.	+ 3	15 00	Mexico, east of states of Sonora, Sinaloa & Nayarit	- 6	06 00
Congo, Republic of (Brazzaville)	+ 1	13 00	Sonora, Sinaloa, Nayarit, Baja California (south of 28°N), Revillagigedo Is.	- 7	05 00
Congo, Republic of the (Leopoldville), western part, eastern part	+ 1	13 00	Baja California (north of 28°N)	- 8	04 00
Cook Is.	+ 2	14 00	Midway Is.	- 11	01 00
Costa Rica, Cocos Is.	- 6	06 00	Molucca Is. (Indonesia)	+ 8 1/2	20 30
Groet Is.	+ 3	15 00	Monaco	+ 1	13 00
Cuba	- 5	07 00	Mongolia*		
Cyprus Is.	+ 2	14 00	Morocco	0	12 00
Czechoslovakia	+ 1	13 00	Mozambique	+ 2	14 00
Dahomey	+ 1	13 00	Muscat & Oman	+ 4	16 00
Das Is.	+ 4	16 00	Nauru Is., Norfolk Is.	+ 11 1/2	23 30
Denmark	+ 1	13 00	Navassa Is.	- 5	07 00
Dominican Republic	- 5	07 00	Nepal	+ 5 1/2	17 30
Easter Is.	- 7	05 00	Netherlands	+ 1	13 00
Ecuador, Galapagos Is.	- 5	07 00	Netherlands Antilles	- 4 1/2	07 30
Egypt	+ 2	14 00	New Caledonia Is., New Hebrides Is.	+ 11	23 00
El Salvador	- 6	06 00	New Guinea N. E., Papua	+ 10	22 00
Ethiopia	+ 3	15 00	New Zealand, Kermadec Is.	+ 12	24 00
			Nicaragua	- 6	06 00
			Niger	+ 1	13 00
			Nigeria	+ 1	13 00
			Niue Is.	- 11	01 00
			Norway, Svalbard Is.	+ 1	13 00
* No definite standard time used.					
** "Arabic Time", i.e. daily all watches are set to midnight at sundown.					

RADIO AMATEURS PREFIX



MAP OF THE WORLD



PREFIXES-BY COUNTRIES

The following countries listed in alphabetical order by country show International radio amateur prefixes. Characters in [] designate the continent and zone in which the country is located. Abbreviations are as follows: A—Asia, AF—Africa, E—Europe, NA—North America, O—Oceania, SA—South America.

INTERNATIONAL "Q" SIGNALS

Abbreviation	Question	Answer or Advice	Abbreviation	Question	Answer or Advice
QRA	What is the name of your station?	The name of my stations is . . .	QSX	Will you listen to . . . [call sign(s)] on . . . kc/s (or Mc/s)	I am listening to . . . [call sign(s)] on . . . kc/s (or Mc/s).
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles (or kilometres)	QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency [or on . . . kc/s (or Mc/s)].
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .	QSZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).
QRG	Will you tell me my exact frequency or that of . . .?	Your exact frequency (or that of . . .) is . . . kc/s (or Mc/s).	QTA	Shall I cancel telegram number . . . as if it had not been sent?	Cancel telegram number . . . as if it had not been sent.
QRH	Does my frequency vary?	Your frequency varies.	QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QRI	How is the tone of my transmission?	The tone of your transmission is . . . (1. Good; 2. Variable; 3. Bad).	QTC	How many telegrams have you to send?	I have . . . telegrams for you (or for . . .).
QRK	What is the readability of my signals (or those of . . .)?	The readability of your signals (or those of . . .) is . . . (1. Unreadable; 2. Readable now and then; 3. Readable, but with difficulty; 4. Readable; 5. Perfectly readable).	QTE	What is my TRUE bearing from you? or What is my TRUE bearing from . . . (call sign)?	Your TRUE bearing from me is . . . degrees (at . . . hours) or Your TRUE bearing from . . . (call sign) was . . . degrees (at . . . hours) or The TRUE bearing of . . . (call sign) from . . . (call sign) was . . . degrees at . . . hours.
QRL	Are you busy?	I am busy (or I am busy with . . .). Please do not interfere.	QTG	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]? or Will you request . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s)?	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) [on . . . kc/s (or Mc/s)] or I have requested . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s).
QRM	Are you being interferred with?	I am being interferred with.	QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is . . . latitude . . . longitude (or according to any other indication).
QRN	Are you troubled by static?	I am troubled by static.	QTI	What is your TRUE track?	My TRUE track is . . . degrees.
QRO	Shall I increase power?	Increase power.	QTJ	What is your speed?	My speed is . . . knots (or kilometres per hour).
QRP	Shall I decrease power?	Decrease power.	QTL	What is your TRUE heading?	My TRUE heading is . . . degrees.
QRQ	Shall I send faster?	Send faster (. . . words per minute).	QTN	At what time did you depart from . . . (place)?	I departed from . . . (place) at . . . hours.
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at . . . words per minute.	QTO	Have you left dock (or port)? or Are you airborne?	I have left dock (or port) or I am airborne.
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).	QTP	Are you going to enter dock (or port)? or Are you going to alight (or land)?	I am going to enter dock (or port) or I am going to alight (or land).
QRT	Shall I stop sending?	Stop sending.	QTQ	Can you communicate with my station by means of the International Code of Signals?	I am going to communicate with your station by means of the International Code of Signals.
QRU	Have you anything for me?	I have nothing for you.	QTR	What is the correct time?	The correct time is . . . hours.
QRV	Are you ready?	I am ready.	QTS	Will you send your call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that your frequency may be measured?	I will send my call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that my frequency may be measured.
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s)?	Please inform . . . that I am calling him on . . . kc/s (or Mc/s).	QTU	What are the hours during which your station is open?	My station is open from . . . to . . . hours.
QRX	When will you call me again?	I will call you again at . . . hours [on . . . kc/s (or Mc/s)].	QTV	Shall I stand guard for you on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours).
QRY	What is my turn?	Your turn is Number . . . (Relates to communication.)	QTX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours).
QRZ	Who is calling me?	You are being called by . . . [on . . . kc/s or Mc/s].	QUA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . (1. Scarcely perceptible; 2. Weak; 3. Fairly good; 4. Good; 5. Very good).	QUB	Can you give me, in the following order, information concerning: visibility, height of clouds, direction and velocity of ground wind at . . . (place of observation)?	Here is the information requested . . .
QSB	Are my signals fading?	Your signals are fading.	QUC	What is the number (or other indication) of the last message you received from me [or from (call sign)]?	The number (or other indication) of the last message I received from you [or from . . . (call sign)] is . . .
QSD	Is my keying defective?	Your keying is defective.	QUD	Have you received the urgency signal sent by . . . (call sign of mobile station)?	I have received the urgency signal sent by . . . (call sign of mobile station) at . . . hours.
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time.	QUF	Have you received the distress signal sent by . . . (call sign of mobile station)?	I have received the distress signal sent by . . . (call sign of mobile station) at . . . hours.
QSI	What is the charge to be collected per word to . . . including your internal telegraph charge?	The charge to be collected per word to . . . including my internal telegraph charge is . . . francs.	QUG	Will you be forced to alight (or land)?	I am forced to alight (or land immediately).
QSK	Can you hear me between your signals?	I can hear you between my signals.	QUH	Will you give me the present barometric pressure at sea level?	I shall be forced to alight (or land at . . . (position or place)).
QSL	Can you acknowledge receipt?	I am acknowledging receipt.			The present barometric pressure at sea level is . . . (units).
QSM	Shall I repeat the last telegram which I sent you, or some previous telegram?	Repeat the last telegram which you sent me [or telegram(s) number(s) . . .].			
QSN	Did you hear me [or . . . (call sign) on . . . kc/s (or Mc/s)]?	I did hear you [or . . . (call sign) on . . . kc/s (or Mc/s)].			
QSO	Can you communicate with . . . direct or by relay?	I can communicate with . . . direct (or by relay through . . .).			
QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.			
QSQ	Have you a doctor on board [or is . . . (name of person) on board]?	I have a doctor on board [or . . . name of person] is on board.			
QSU	Shall I send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	Send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).			
QSV	Shall I send a series of V's on this frequency [or on . . . kc/s (or Mc/s)]?	Send a series of V's on this frequency [or . . . kc/s (or Mc/s)].			
QSW	Will you send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	I am going to send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).			
			QUH	Will you give me the present barometric pressure at sea level?	

CENSUS OF AMATEUR RADIO LICENSES* in the U.S.A.

by classes, within states and call areas

Call Area	State	Novice	Tech-nician	Con-ditional	General	Advanced	Extra	Club	Military	State totals	YL's (Included in state totals)
#1	Conn.	376	681	708	1,654	965	264	77	7	4,732	164
	Maine	79	118	522	380	298	83	17	2	1,499	64
	Mass.	603	2,890	555	3,920	2,057	482	125	21	10,653	441
	N.H.	73	397	190	563	289	69	26	3	1,610	76
	R.I.	64	451	104	545	251	59	22	5	1,501	68
	Vermont	54	80	207	168	129	29	11	2	680	42
		<u>1,249</u>	<u>4,617</u>	<u>2,286</u>	<u>7,230</u>	<u>3,989</u>	<u>986</u>	<u>278</u>	<u>40</u>	<u>20,675</u>	<u>855</u>
#2	N.J.	853	3,132	357	4,736	2,659	655	168	11	12,571	321
	N.Y.	<u>1,866</u>	<u>5,498</u>	<u>773</u>	<u>8,715</u>	<u>4,581</u>	<u>1,061</u>	<u>333</u>	<u>35</u>	<u>22,862</u>	<u>732</u>
		<u>2,719</u>	<u>8,630</u>	<u>1,130</u>	<u>13,451</u>	<u>7,240</u>	<u>1,716</u>	<u>501</u>	<u>46</u>	<u>35,433</u>	<u>1,053</u>
#3	Del.	88	111	36	264	142	32	10	2	685	19
	D.C.	31	60	20	179	124	48	19	7	488	6
	Md.	422	785	244	2,011	1,316	345	66	27	5,216	142
	Pa.	<u>1,136</u>	<u>3,517</u>	<u>756</u>	<u>5,687</u>	<u>2,765</u>	<u>631</u>	<u>222</u>	<u>28</u>	<u>14,742</u>	<u>496</u>
		<u>1,677</u>	<u>4,473</u>	<u>1,056</u>	<u>8,141</u>	<u>4,347</u>	<u>1,056</u>	<u>317</u>	<u>64</u>	<u>21,131</u>	<u>663</u>
#4	Alabama	284	590	676	1,182	587	130	25	17	3,491	150
	Florida	743	1,737	1,731	3,733	2,667	538	110	22	11,281	457
	Georgia	267	543	793	1,365	739	173	44	13	3,937	110
	Ky.	255	430	448	729	460	96	29	9	2,456	73
	N.C.	351	589	869	1,393	865	169	45	11	4,292	142
	S.C.	175	162	847	452	316	88	18	12	2,070	70
	Tenn.	378	1,052	572	1,345	898	181	49	7	4,482	169
	Va.	377	816	764	2,022	1,280	344	58	34	5,695	126
		<u>2,830</u>	<u>5,919</u>	<u>6,700</u>	<u>12,221</u>	<u>7,812</u>	<u>1,719</u>	<u>378</u>	<u>125</u>	<u>37,704</u>	<u>1,297</u>
#5	Ark.	174	284	369	489	371	79	26	7	1,799	91
	La.	280	408	608	1,036	636	136	37	14	3,155	112
	Miss.	108	130	403	446	303	45	10	4	1,449	44
	N.M.	118	167	520	349	362	108	18	10	1,652	63
	Okla.	337	649	457	986	699	130	38	38	3,334	155
	Texas	<u>1,138</u>	<u>2,492</u>	<u>2,822</u>	<u>4,599</u>	<u>3,120</u>	<u>636</u>	<u>159</u>	<u>52</u>	<u>15,018</u>	<u>736</u>
		<u>2,155</u>	<u>4,130</u>	<u>5,179</u>	<u>7,905</u>	<u>5,491</u>	<u>1,134</u>	<u>288</u>	<u>125</u>	<u>26,407</u>	<u>1,201</u>
#6	Calif.	<u>2,863</u>	<u>7,944</u>	<u>3,492</u>	<u>14,264</u>	<u>9,599</u>	<u>1,824</u>	<u>509</u>	<u>96</u>	<u>40,591</u>	<u>1,484</u>
#7	Arizona	206	661	590	1,037	820	157	31	19	3,521	166
	Idaho	112	64	426	166	210	34	13	0	1,025	57
	Montana	122	44	570	133	167	48	17	4	1,105	54
	Nevada	71	109	402	152	182	29	10	6	961	52
	Oregon	472	511	759	1,358	941	163	53	9	4,266	219
	Utah	192	238	165	453	289	54	15	10	1,416	55
	Wash.	710	977	1,135	2,291	1,554	317	74	19	7,077	372
	Wyoming	57	37	221	94	79	23	16	4	531	26
		<u>1,942</u>	<u>2,641</u>	<u>4,268</u>	<u>5,684</u>	<u>4,242</u>	<u>825</u>	<u>229</u>	<u>71</u>	<u>19,902</u>	<u>1,001</u>
#8	Mich.	1,116	2,654	945	3,882	2,063	323	131	11	11,125	403
	Ohio	<u>1,565</u>	<u>5,080</u>	<u>638</u>	<u>5,477</u>	<u>2,756</u>	<u>480</u>	<u>208</u>	<u>18</u>	<u>16,222</u>	<u>602</u>
	W.Va.	<u>169</u>	<u>341</u>	<u>175</u>	<u>633</u>	<u>287</u>	<u>76</u>	<u>17</u>	<u>5</u>	<u>1,703</u>	<u>48</u>
		<u>2,850</u>	<u>8,075</u>	<u>1,758</u>	<u>9,992</u>	<u>5,106</u>	<u>879</u>	<u>356</u>	<u>34</u>	<u>29,050</u>	<u>1,053</u>
#9	Ill.	1,253	3,206	1,544	5,236	2,839	488	212	19	14,797	553
	Ind.	708	1,921	511	2,203	1,149	211	116	8	6,827	300
	Wisc.	555	758	816	1,586	985	178	69	15	4,962	123
		<u>2,516</u>	<u>5,885</u>	<u>2,871</u>	<u>9,025</u>	<u>4,973</u>	<u>877</u>	<u>397</u>	<u>42</u>	<u>26,586</u>	<u>976</u>
#10	Colo.	332	533	641	1,175	826	157	57	15	3,736	167
	Iowa	444	515	529	1,524	896	153	68	8	4,137	154
	Kans.	318	381	850	1,034	627	155	34	17	3,416	165
	Minn.	561	510	792	1,687	990	227	65	6	4,838	144
	Mo.	541	1,030	797	1,916	1,163	247	79	12	5,785	219
	Nebr.	206	274	451	664	424	62	32	2	2,115	102
	N.D.	65	11	410	63	102	22	9	3	685	39
	S.D.	103	44	234	220	173	33	14	3	824	52
		<u>2,570</u>	<u>3,298</u>	<u>4,704</u>	<u>8,283</u>	<u>5,201</u>	<u>1,056</u>	<u>358</u>	<u>66</u>	<u>25,536</u>	<u>1,042</u>
KH6	Hawaii	145	86	224	476	365	62	24	26	1,408	43
KL7	Alaska	134	98	214	367	239	61	9	61	1,183	83
Grand total, 50 states and D.C. only											
		<u>23,650</u>	<u>55,796</u>	<u>33,882</u>	<u>97,039</u>	<u>58,604</u>	<u>12,195</u>	<u>3,644</u>	<u>796</u>	<u>285,606</u>	<u>10,751</u>

* From the Fall 1971 Radio Amateur Callbook Magazine.

NEW YORK, N.Y.

The table below shows the great circle bearing in degrees and the distance in statute miles, from the point indicated above to countries throughout the world having licensed radio amateurs.

PREFIX	CCOUNTRY	BEARING	MILES	PREFIX	COUNTRY	BEARING	MILES	PREFIX	CCOUNTRY	BEARING	MILES
A2C,ZS9	BOTSWANA, MAFEKING	105	7879	KR6,8	RYUKYU IS (OKINAWA)	339	7557	VP8,LU-Z	SOUTH GEORGIA IS	159	6911
AC3	SIKKIM, GANGTOK	16	7644	KS4	SWAN IS	203	1743	VP8,LU-Z	SOUTH ORKNEY IS	166	7223
AC4	TIBET, LHASA	14	7468	KS48, HK0	SERRANA BANK & RONCATOR CAY	193	1881	VP8,LU-Z	SOUTH SANDWICH IS	156	7348
AC5	BHUTAN	15	7658	KW6	AMERICAN SAMOA	264	7211	VP8,LU-Z	SOUTH SHETLAND IS	170	7192
AP	EAST PAKISTAN, DACC	16	7860	KV4	VIRGIN IS, CHARLOTTE AMALIE	158	1661	VP9	BERMUDA IS, HAMILTON	137	786
AP	WEST PAKISTAN, KARACHI	36	7264	KW6	WAKE IS	303	6759	VP9	ZANZIBAR	79	7702
BV	TAIWAN (FORMOSA), TAIPEI	345	7804	KX6	MARSHALL IS	296	7220	VP9	CHAGOS IS	50	9265
BY	CHINA, PEKING	352	6833	KZ5	CANAL ZONE, COLON	191	2222	VP9	SEYCHELLES IS	65	8502
C21,VK9	REP. OF NAURU	290	7712	LA,LF,LJ	NORWAY, CSLO	38	3689	VR1	BRITISH PHOENIX IS	283	7650
C31,PX	ANDORRA, ANDORRA	62	3767	LU	ARGENTINA, BUENOS AIRES	167	5335	VR1	GILBERT, ELLICE & OCEAN IS	281	7497
CE	CHILE, SANTIAGO	177	5102	LX	LUXEMBOURG, LUXEMBOURG	51	3757	VR2	FIJI IS, SUVA	267	7957
CE9	S. SHETLAND IS	171	7184	LZ	BULGARIA, SOFIA	52	4697	VR3	FANNING & CHRISTMAS IS	270	5778
CE0A	EASTER IS	212	5191	M1,9A1	SAN MARINO, SAN MARINO	55	4195	VR4	SELCOMON IS	290	8493
CE0X	SAN FELIX IS	186	4629	MP4B	BAHRAIN IS	48	6646	VR5	TCNGA IS, NUKUALOFA	260	7717
CE0Z	GUAN FERNANDEZ	185	5112	MP4D	DAS IS	47	6777	VR6	PITCAIRN IS	229	5790
CM,CD	CUBA, HAVANA	203	1308	MP4M	MUSCAT & OMAN, MASQAT	43	7056	VSS	BRUNEI	347	9237
CN2,8,9	MOROCCO, CASABLANCA	75	3579	MP4Q	CATAR	48	6700	VS6	HONG KONG	352	8082
CP	BOLIVIA, LA PAZ	173	3941	MP4T	TRUCIAL STATES	47	6871	VS9A,P,S	SOUTH YEMEN, ADEN	61	7074
CR3	PORTUGUESE GUINEA, BISSAU	102	4023	OA	PERU, LIMA	184	3650	VS9K	KAMARAN IS	61	6882
CR4	CAPE VERDE IS	105	3436	OD5	LEBANON, BEIRUT	53	5593	VU	INDIA, CALCUTTA	18	7896
CR5	PRINCIPE & SAO TOME IS	95	5714	OE	AUSTRIA, VIENNA	50	4224	VU4	LAGADIVE IS	39	8363
CR6	ANGOLA, NOVA LISBOA	100	6814	OH	FINLAND, HELSINKI	35	4128	VU5	ANDAMAN & NICOBAR IS	16	8713
CR7	MOZAMBIQUE, LORENCO MARQUES	101	8238	OH0	ALAND IS	36	3976	XE,XF,4A	MEXICO, MEXICO CITY	232	2103
CR8	PORTUGUESE TIMOR	325	9935	OK,OL	CZECHOSLOVAKIA, PRAGUE	49	4078	XE4	REVILLAGIGEDO IS	247	2644
CR9	MACAO	352	8082	ON	BELGIUM, BRUSSELS	51	3649	XZ2,FF8	UPPER VOLTA, OUAGADOUGOU	92	4751
CT1	PORTUGAL, LISBON	69	3377	OX,XP	GREENLAND, GODTHAB	22	1841	XU	CAMBODIA, PHNOM PENH	1	8805
CT2	AZORES IS	79	2445	OY	FAERDES IS, TORSHAVN	38	3072	XW8	LAOS, VIENTIANE	3	8386
CT3	MADEIRA IS	81	3149	OZ	DENMARK, COPENHAGEN	42	3860	XZ2	BURMA, RANGOON	11	8409
CX	URUGUAY, MONTEVIDEO	165	5361	PA,PE,PI	NETHERLANDS, AMSTERDAM	49	3665	YA	AFGHANISTAN, KANDAHAR	34	6784
DC,DJ-L	W. GERMAN FEDERAL REP., BONN	50	3770	PJ2	NETH. ANTILLES, CURACAO	170	2009	YB-D,8F,PKINDONESIA, DJAKARTA	358	10049	
DM	E. GERMAN DEM. REP., BERLIN	46	3946	PJ3,9	NETH. ANTILLES, ARUBA	171	1932	YI	IRAQ, BAGHDAD	48	6005
DU	PHILIPPINES, MANILA	343	8478	PJ4,9	NETH. ANTILLES, BONAIRE	168	2020	YJ,FUB	NEW HEBRIDES, VILA	274	8481
EA	SPAIN, MADRID	66	3591	PJ5	NETH. ANTILLES, ST. EUSTATIUS	155	1768	YK	SYRIA, DAMASCUS	53	5682
EA6	BALEARIC IS	64	3956	PJ6	NETH. ANTILLES, SABA	154	1703	YN,HT	NICARAGUA, MANAGUA	203	2113
EA8	CANARY IS	85	3422	PJ7	NETH. ANTILLES, SINT MAARTEN	154	1703	YD	ROMANIA, BUCHAREST	49	4777
EA9	CEUTA & MELILLA	71	3665	PY	BRAZIL, BRASILIA	151	4265	YS	EL SALVADOR, SAN SALVADOR	210	2054
EA9	SPANISH SAHARA(RIO DE ORO)	89	3675	PY7	FERNANDO DE NORONHA	129	4078	YU,YT	YUGOSLAVIA, BELGRADE	51	4495
EI	IRELAND, DUBLIN	51	3202	PY8	TRINIDADE & MARTIM VAZ IS	137	5159	YV	VENEZUELA, CARACAS	166	2168
EL,5L	LIBERIA, MONROVIA	89	5698	PZ	SURINAM, PARAMARIBO	149	2676	YV8	AVES IS	166	2032
EP	IRAN, TEHRAN	42	6158	SK,SL,SM	SWEDEN, STOCKHOLM	38	3943	ZA	ALBANIA, TIRANA	55	4651
ET3	ETHIOPIA, ADDIS ABABA	68	6990	SP,3Z	FOLAND, WARSAW	44	4276	ZB2	GIBRALTAR	66	4154
F	FRANCE, PARIS	54	3617	ST	SUDAN, KHARTOUM	67	6362	ZC4,5B4	CYPRUS, NICOSIA	53	5462
FBBZ	AMSTERDAM & ST. PAUL IS	92	10953	SU	EGYPT, CAIRO	58	5608	ZD3	GAMBIA, BATHURST	102	3927
FB8H	CROZET IS	116	9767	SV	GREECE, ATHENS	55	4946	ZD5,ZST	SWAZILAND, MBABANE	102	8135
FB8X	KERGUELEN IS	120	10573	SV5	CRETE	57	5118	ZD7	ST. HELENA IS	108	6441
FC	CORSICA	59	4132	SV5	DODECANESE IS	55	5162	ZD8	ASCENSION IS	116	5086
FG7	GUADELOUPE IS	153	1856	TA,TC	TURKEY, ANKARA	49	5230	ZD9	TRISTAN DA CUNHA & GOUGH IS	135	6659
FH8,FBB	CCMCRD IS	81	8180	TF	ICELAND, REYKJAVIK	34	2614	ZE	RHODESIA, SALISBURY	95	7810
FK8	NEW CALEDONIA, NOUMEA	271	8749	TG	GUATEMALA, GUATEMALA CITY	213	2019	ZF1,VP5	CAYMAN IS	195	1541
FL8	FRENCH SMCALILAND, DJIBOUTI	63	7032	TI	COSTA RICA, SAN JOSE	199	2208	ZK1	CCOK IS	251	6811
FM7	MARTINIQUE	152	1945	TI9	COCOS IS	200	2578	ZK1	MANIHIKI IS	260	6463
FO8	FRENCH POLYNESIA, TAHITI	247	6280	TJ,FE8	CAMEROON, YAOUNDE	90	5841	ZK2	NIUE IS	259	7375
FO8	CLIPPERTON IS	235	3008	TL8,FO8	CENTRAL AFRICAN REP., BANGUI	85	6207	ZL	NEW ZEALAND, AUCKLAND	250	8818
FP8	ST. PIERRE & MIQUELON IS	58	999	TN,FO8	CONGO REPUBLIC, BRAZZAVILLE	94	6359	ZL	AUCKLAND & CAMPBELL IS	235	9554
FR7	GLORIOSO IS	78	8341	TR8,FO8	GABON REPUBLIC, LIBREVILLE	95	5864	ZL	CHATHAM IS	239	8652
FR7	JUAN DE NOVA	86	8397	TR8,FO8	CHAD REPUBLIC, FORT-LAMY	81	5640	ZL	KERMADEC IS	254	8227
FR7	REUNION IS, SAINT-DENIS	81	9189	TU2,FF4	IVORY COAST, ABIDJAN	99	4960	ZM7	TCKELAU IS	268	7043
FR7	TROMELIN	77	8923	TY,FF8	DAHOMEY REP., PORTO NOVO	94	5279	ZP	PARAGUAY, ASUNCION	164	4661
FS7	SAINT MARTIN IS	154	1703	TZ,FF8	MALI REPUBLIC, BAMAKO	96	4393	ZS1,2,4-6	SOUTH AFRICA, CAPE TOWN	116	7803
FUB,YJ	NEW HEBRIDES, VILA	274	8481	UA,KV,W	EUROPEAN RUSSIA, S.F.S.R.	34	4676	ZS2	PRINCE EDWARD & MARION IS	121	9143
FW8	WALLIS & FUTUNA IS	267	7525	UA1,UK	FRANZ JESSEF LAND	8	3825	ZS3	S.W. AFRICA (NAMIBIA), WINDHOEK107	7301	
FY7	FRENCH GUIANA, CAYENNE	61	7903	UA2,UK	KALININGRADSK	41	4136	ZA	MCNAC	57	3977
GC	ENGLAND, LONDON	52	3486	UB,K,T5,YS	USSR, AZERBAIJAN S.S.R.	13	5694	3B6,VQ8	AGALEGA IS	69	8796
GC	GUERNSEY & DEPENDENCIES	55	3447	UB,K,T5,YS	WHITE RUSSIAN S.S.R.	42	4790	3B8,VQ8	MAURITIUS IS	78	9302
GC	JERSEY IS	55	3447	UC2,UK	ASIANATIC RUSSIAN S.F.S.R.	40	4445	3B9,VQ8	RDIGRUEZ IS	73	9556
GD	ISLE OF MAN, DOUGLAS	49	3266	UD6,UK	AZERBAIJAN S.S.R.	41	5752	3C,EA0	EQUATORIAL GUINEA, BATA	92	5826
GI	NORTHERN IRELAND, BELFAST	48	3172	UF6,UK	GEORGIAN S.S.R.	42	5544	3V8	TUNISIA, TUNIS	63	4355
GM	SCOTLAND, GLASGOW	46	3235	UG6,UK	ARMENIAN S.S.R.	44	5610	3W8,XV5	S. VIETNAM, SAIGON	359	8874
GW	WALES, CARDIFF	53	3362	UH8,UK	TURKMEN S.S.R.	33	6166	4S7	CEYLON, COLOMBO	33	8763
HA,HG	HUNGARY, BUDAPEST	50	4380	UI8,UK	UZBEK S.S.R.	30	6218	4U	UNITED NATIONS, GENEVA	56	3871
HB,HE	SWITZERLAND, BERN	54	3884	UJ8,UK	TADZHIK S.S.R.	26	6514	4W1,3	YEMEN, SANAA	60	6927
HB,HE	LIECHTENSTEIN, VADUZ	53	4011	UJ7,UK	KAZAKH S.S.R.	24	5891	4X4,4Z4	ISRAEL, TEL AVIV	54	5688
HC	ECUADOR, QUITO	186	2826	UKR	KIRGHIZ S.S.R.	23	6476	5A	LIBYA, TRIPOLI	65	4649
HC8	GALAPAGOS IS	204	2987	UO5,UK	MOLDAVIAN S.S.R.	45	4767	5H3,VQ3	TANANGIKA, DAR-ES-SALAAM	80	7747
HH	HAITI, PORT-AU-PRINCE	175	1506	UP2,UK	LITHUANIAN S.S.R.	39	4237	5N2,ZD2	NIGERIA, LAGOS	94	5279
HI	DOMINICAN REP., SANTO DOMINGO	170	1589	UQ2,UK	LATVIAN S.S.R.	38	4234	5R8,F8B	MALAGASY REP., TANANARIVE	84	8742
HK	COLOMBIA, BOGOTA	180	2539	UR2,UK	ESTONIAN S.S.R.	36	4163	5T5,FF7	MAURITANIA, NOUAKCHOTT	97	3761
HK0	MALPELO IS	193	2586	VE1	CANADA, HALIFAX	56	592	5U7,FF8	NIGER, NIAMEY	88	4874
HM,HL9	SAN ANDRES & PROVIDENCIA IS	194	1961	VE2	CANADA, MONTREAL	1	367	5V,FD	TCGG, LOME	95	5175
HP	KOREA, SEOUL	343	6846	VE3	CANADA, TORONTO	314	339	5W1,ZM6	WESTERN SAMOA, APIA	264	7263
HR	PANAMA, PANAMA	191	2222	VE4	CANADA, WINNIPEG	308	1278	5X5,VQ5	UGANDA, KAMPALA	79	7065
HS	THAILAND, BANGKOK	207	2004	VE5	CANADA, SASKATOON	308	1734	5Z4,VQ4	KENYA, NAIROBI	77	7368
HV	VATICAN CITY	57	4265	VE7	CANADA, EDMONTON	310	2008	601,2,6	SIOMALI REP., MOGADISHO	69	7624
HZ,TZ	SAUDI ARABIA, MECCA	58	6395	VE8	CANADA, VANCOUVER	300	2421	6W8,FF8	SENEGAL REP., DAKAR	100	3838
I,IR0	ITALY, ROME	57	4265	VK,X	AUSTRALIA, BRISBANE	274	9622	7G1,3X	JAMAICA, KINGSTON	187	1580
IS	SARDINIA	61	4201	VK2	AUSTRALIA, BRISBANE	264	9478	7P8,ZS8	GAMBIA, CONAKRY	102	4217
IT	SICILY	61	4540	VK7	LORD HOWE IS	264	9478	7Q7,ZD6	LESOTHO, MASERU	107	8048
JD	OGASAWARA IS (BONIN)	333	6720	VK9AA-MZ	PAPUA & NEW GUINEA TERR.	252	10348	7Q7,ZD6	MALAWI, BLANTYRE	90	7935
JA,JH, JR	JAPAN, TOKYO	327	7226	VK9N	NORFOLK IS	263	8908	7Z,H	SAUDI ARABIA, MECCA	59	6445
JD1	MINAMI-TORI-SHIMA IS (MARCUS)	316	7012	VK9X	CHRISTMAS IS	0	10327	8P6,VP6	BARBADOS IS, BRIDGETOWN	152	2098
JT1	MONGOLIA, ULAN BATOR	359	6315	VK9Y	COCOS IS	18	10393	8Q4,VS9M	MALDIVES IS	43	8783
JW,LA/P	VALDARBOARD IS	15	3542	VK0	HEARD IS	130	10699	8R,VP3	GUYANA, GEORGETOWN	153	2534
JX,LA/P											

WORLD WIDE QSL BUREAUS

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AP	Pakistan Amateur Radio Society, QSL Bureau, P O Box 65, Lahore, West Pakistan, Asia	KR6	QSL Bureau, OARC, APO San Francisco 96331, USA	VP8	Falkland Is & South Georgia - direct or the CX QSL Bureau, P O Box 37, Montevideo, Uruguay, South America
CE	Radio Club of Chile, P O Box 13630, Correo 15, Santiago, Chile, South America	KR8	QSL Bureau, RARC, CPO Box 96, Naha, Okinawa	VP9	All other VP8 bases via - RSGB, England
CM-C0	Federacion de Radioaficionados de Cuba, P O Box 6996, Havana, Cuba	KS4	Swan Island, West Indies, via Tampa, Florida, USA	VQ1	Radio Society of Bermuda, P O Box 275, Hamilton, Bermuda
CN	ARRAM, P O Box 299, Rabat, Morocco, Africa	KV4	Graciano Belardo, KV4CF, P O Box 572, Christiansted, St. Croix 00820, Virgin Is, West Indies	KW6	The RSEA QSL Bureau, P O Box 2387,
CN9	Amateur Radio Club Zona Norte, P O Box 124, Tetuani, Morocco, Africa, or via RR or AAEM	KX6	Jack A Chalk, P O Box 7, Wake Island 96930	VR2	Dar-Es-Salaam, Tanzania, East Africa
CP	Radio Club Boliviano, P O Box 2111, La Paz, Bolivia, South America	KX6	Kwajalein Amateur Radio Club, KX6WB, P O Box 444, APO San Francisco 96555, USA	V55	The QSL Bureau, P O Box 184, Suva, Fiji Islands
CP5	QSL Bureau, P O Box 1900, Cochabamba, Bolivia, S.A.	KX6	Eniwetok Amateur Radio Club, Air Force Western Tesi Range, APO San Francisco 96333 USA	VS6	SARTS, P O Box 2728, Singapore 1, Asia
CP6	QSL Bureau, P O Box 393, Santa Cruz, Bolivia, S.A.	KZ5	Via KZ5GS, Gloria M Spears, P O Box 407, Balboa, Canal Zone, Central America	VS9M	Hong Kong Amateur Radio Transmitting Society, P O Box 541, Hong Kong, Asia
CR4	Radio Club de Cabo Verde, CR4AA, Praia, Sao Tiago, Cape Verde Islands, Africa	LA	Norwegian Radio Relay Liga, P O Box 21, Refstad, Oslo 5, Norway, Europe	VU	RG5B, 28 Little Russell St, London, WC 1, England
CR6	LARA, P O Box 484, Luanda, Angola, Africa	LU	RCA, Radio Club Argentino, Carlos Calvo 1424, Buenos Aires, Argentina, South America	W1-K1	Amateur Radio Society of India, P O Box 534, New Delhi 1, India, Asia
CR7	LREM, Liga dos Radio Emissoras do Moçambique, P O Box 812, Lourenco Marques, Mozambique, Africa	LX	Robert Schott, LX1DC, 35 Rue Batty Weber, Esch s/Alzette, Luxembourg, Europe	W2-K2	Foreign stations only, via Hampden County A R Assn, Box 216, Forest Park Stn, Springfield, Mass 01108
CR9	Hong Kong Amateur Radio Transmitting Society, P O Box 541, Hong Kong, Asia	MP4	Ian Cable, MP4BBW, Box 425, Awali, Bahrain Is, Asia	W3-K3	Foreign stations only, via W3KT, Jesse Blehner, RFD 1, Valley Hill Rd, Malvern, Pa. 19355
CT	REP, P O Box 2483, Lisbon, Portugal, Europe	OA	RCP, Radio Club of Peru, Box 538, Lima, Peru, S.A.	W4-K4	Foreign stations only, via K4HXF, K4JPR, RFD 5, Box 804, Hickory, N.C., 28601
CX	Radio Club of Uruguay, P O Box 37, Montevideo, Uruguay, South America	OD5	RAL QSL Bureau, Box 1217, Beirut, Lebanon, Asia	WA4-WB4-WN4	Foreign stations only, via W4LR, J R Baker, P O Box 1989, Melbourne, Florida 32901
DA,B,C,F,J,K,L	DARC QSL Bureau, P O Box 86 03 20, 8 Munich 86, West German Federal Republic, Europe	OE	OE, VSV QSL Bureau, P O Box 999, Vienna 1/9, Austria	W5-K5	Foreign stations only, via W5QM, Kenneth F Isbell, 306 Kesterfield Blvd, Enid, Oklahoma 73701
DA2-DL5X-Y	J T Womali, DL2AH, Am alten polversuppen 80, 3090 Verde Aler, Germany	OH	SRAL QSL Bureau, P O Box 10306, Helsinki 10, Finland	W6-K6	Foreign stations only, via W6CDC, Box 11, Los Allos, California 94022
DA2-DL5S,R	R, T French, Via REF QSL Bureau, P O Box 70, 75 Paris 12e, France, Europe	OK-OL	Central QSL Bureau, Box 830, Sofia, Bulgaria, Europe	W7-K7	Foreign stations only, via Willamette Valley DX Club, Box 55, Portland, Oregon 97207
DL4-5	QSL Bureau, 7172 Hessian-Schwaebisch Hall Flugplatz, 14th AVN Co -ATC-, APO New York 09025	ON	Geom Mario Graziani, M1B, via Della Tana 226, Republic of San Marino, Europe	WB-K8	Foreign stations only, via W8TO, Columbus A R Assn, Radio Rm, 280 E Broad St, Columbus, Ohio 43215
DM	DM QSL Bureau, P O Box 30, Berlin 55, East German Democratic Republic, Europe	OR	Ian Cable, MP4BBW, Box 425, Awali, Bahrain Is, Asia	W9-K9	Foreign stations only, via ARRL QSL Bureau, P O Box 519, Elmhurst, Illinois 60126
DU	PARA QSL Bureau, P O Box 4083, Manila, Philippines	OX-0Z	RAL QSL Bureau, Box 1217, Beirut, Lebanon, Asia	W0	Foreign stations only, via WB0YP, Reggie Hoare, Box 115, Mitchellville, Iowa 50169
EA	URE, Union of Radioaficionados Espanoles, P O Box 220, Madrid, Spain, Europe	OX4	EDR QSL Bureau, Ingrstrup, 9480 Lekken, Denmark, Europe	KP,WB0,WN0	KP, WB0, WN0 Foreign stations only, via K0ZFL, Dr Phillip Rowley, RFD 1, Box 455, Alamosa, Colorado 81101
EI	IRTS QSL Bureau, P O Box 462, Stella Av, Dublin 20124, Ireland	OX5	EDR QSL Bureau, Ingrstrup, 9480 Lekken, Denmark, Europe	WA0	Foreign stations only, via WB0QJ, Lloyd Harvey, P O Box 7, Attica, Iowa 50024
EL	Or El-QSL-Bureau, P O Box 73, Athlone, Ireland Cards for EL1 & 2 only - G Marcus Kelly, c/o Liberian Govt, Radio Stn, Monrovia, Liberia, Africa	PA-PE-PI	PA-PE-PI Dutch QSL Bureau, P O Box 400, Rotterdam, Netherlands	XWB	Houmphanh Saengsith, XWBAL, Statistics Dept, P O Box 46, Vientiane, Laos, Asia
EP	Amateur Radio Society of Iran, c/o Box 1000 ARMISH-MAAG, APO New York 09205	PJ	VERONA QSL Bureau, P O Box 383, Willemstad, Curacao, Netherlands Antilles, S.A.	XZ	BARTS, P O Box 800, Rangoon, Burma, Asia
ET3	Telecommunications Amateur Radio Club, P O Box 1047, Addis Ababa, Ethiopia, Africa Cards for U S Army Personnel may be sent via Kagnew Amateur Radio Club, ET3USA, APO New York 09843	PJ	Cards for Aruba - Aruba Amateur Racio Club, Box 273, San Nicolas, Aruba, Netherlands Antilles, S.A.	YA	CDRC, P O Box 279, Kabul, Afghanistan, Asia
F	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY1	LABRE, Box 2353, Rio de Janeiro, Brazil, S.A.	YB,YC	QSL Bureau, P O Box 2761, Djakarta, Indonesia
F88	REF QSL Service, P O Box 70, Paris 12, France	PY2	LABRE, Box 22, Sao Paulo, SP, Brazil, S.A.	YK	QSL Bureau, P O Box 35, Damascus, Syria, Asia
F67	Radio Club Guadeloupe, P O Box 387, Pointe-a-Pitre, Guadeloupe, West Indies	PY3	LABRE, Box 2180, Porto Alegre, RS, Brazil, S.A.	YN	Via Mike Murciano, YN1MO/W4,
FH8	QL Manager, 5R8BC, P O Box 587, Tananarive, Madagascar, Africa	PY4	LABRE, R. Curitiba 656, Contente 25, Belo Horizonte, MG, Brazil, S.A.	YO	P O Box 902, Coral Gables, Florida 33134 USA
FK8	QSL Bureau, P O Box 637, Noumea, New Caledonia	PY5	LABRE, Box 1455, Curitiba, PR, Brazil, S.A.	YS	The Central Radio Club, P O Box 1395, Bucuresti 5, Romania
FL8	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY6	LABRE, Av Mem DE SA 99, Itapagipe SV, BA, Brasil, S.A.	YU	Oscar R Orellana, YS10, P O Box 329, San Salvador, El Salvador, Central America
FM7	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY7	LABRE, Box 1043, Recife, PE, Brazil, S.A.	YU	Members only - CRAS, P O Box 517, San Salvador, El Salvador, Central America
F88	Radio Club Oceanien, P O Box 374, Papeete, Tahiti	PY7	Fernando do Noronha, via QSL Bureau, P O Box 1043, Recife, Pernambuco, Brazil, S.A.	YU	SRJ, P O Box 48, Belgrade, Yugoslavia, Europe
F98	R E F QSL Bureau, P O Box 70, Paris 12, France	PY8	LABRE, P O Box 233, Manaus, Amazonas, Brasil, S.A.	ZB2	RCV, Radio Club Venezolano, P O Box 2285, Caracas, Venezuela, South America
FY7	R E F QSL Service, P O Box 70, Paris 12, France	PY9	LABRE, Box 2, Cuiaba, MT, Brazil, S.A.	ZC4	Via RAF Amateur Radio Club, Royal Air Force, Gibraltar, Europe
G	RSGB, Radio Society of Great Britain, c/o Arthur Milne, G2MI, 29 Kechill Gdns, Hayes, Bromley, Kent, England BR2 7NA	PY0	Direct or via LABRE, P O Box 1043, Recife, PE, Brasil	ZD7	ZD7 Via P O Jamestown, St. Helena, Africa
G	RSGB, Radio Society of Great Britain, c/o Arthur Milne, G2MI, 29 Kechill Gdns, Hayes, Bromley, Kent, England BR2 7NA	PY1	Radio Club Brasileiro RA-RH, P O Box 14630, Sao Paulo, SP, Brazil, South America	ZD8	ZD8 Ascension Amateur Radio League, ZDBAR, P O Box 4187, Patrick AFB, Florida, USA
GC-GD	RSGB	PZ	VRAS, QSL Manager, P O Box 566, Paramaribo, Surinam, S.A.	ZD9	ZD9 RSGB, c/o Arthur Milne, G2MI, 29 Kechill Gdns, Hayes, Bromley, Kent, England
GI	R R Parsons, G13HXY, 45 Eriavale Av, Finaghy, Belfast 10, Northern Ireland, Europe	SK-SL-SM	SK-12207 Enskede 7, Sweden	ZE	RSR QSL Manager, P O Box 2377, Salisbury, Rhodesia
GM-GW	RSGB	SP	SPZ QSL Bureau, P O Box 320, Warsaw 1, Poland, Europe	ZF1	Cards may be sent direct.
HA-HG	HSRL, P O Box 214, Budapest 5, Hungary	SU	QSL Bureau, P O Box 840, Cairo, Egypt, Africa	ZK1	OSL Bureau, Radio Station Rarotonga, Rarotonga, Cook Is., NZART, P O Box 489, Wellington, New Zealand
HB	USKA, HB9NL, Sonnenrain 188, 6233 Bueron, Luceme, Switzerland, Europe	SV	Mediterranean SV QSL Bureau, P O Box 564, Athens, Greece	ZP	Radio Club Paraguayo, Casilla de Correo 512, Asuncion, Paraguay, South America
HBB	USKA, HB9NL, Sonnenrain 188, 6233 Bueron, Luceme, Switzerland, Europe	SV	Cards may also be sent via SV QSL Bureau, NARU, P O Box 1442, Athens 20, Greece	ZS	For members only - SARL, P O Box 3037, Capetown, Cape Province, South Africa
HC1	Guayaquil Radio Club, P O Box 5757, Guayaquil, Ecuador	SV0	OSL Bureau, c/o MARS Station, P O Box 3055, APO New York 09223 USA	3A2	Pierre Anderhalf, 3A2CN, 41 Blvd, Jardin Exotique, Monaco - or Director Generale des Telecoms, 16 Blvd, de Suisse, Monte Carlo, Monaco, Europe
HC5	Asociacion Radio Ecuatoriana, P O Box 289, Quito, Ecuador, South America	TA-TC	Turkey Radio Amatorler Cemiyeti, P O Box 699, Karakoy, Istanbul, Turkey, Asia	3B7,8,9	3B7,8,9 Port Louis, Mauritius, Africa
HH	Cuenca Radio Club, P O Box 1366, Cuenca, Ecuador	TF	IRB, Isleneski Radio Amatorar, P O Box 1058, Reykjavik, Iceland, Europe	457	Radio Society of Ceylon, QSL Manager, P O Box 907, Colombo, Ceylon, Asia
HI	Radio Club of Haiti, P O Box 708, Port-a-Prince, Haiti	TF	For American amateurs, P O Box 22, USNCS, FPO New York 09571 USA	4W1-4W3	4W1-4W3 Cards for HB9 calls in Yemen, via USKA, HB9NL, Sonnenrain 188, 6233 Bueron, LU, Switzerland
HK	Radio Club Dominicano, P O Box 1157, Santo Domingo, D.N., Dominican Republic, West Indies	TG	CRAG, P O Box 115, Guatemala City, Guatemala, C.A.	4X4-4Z4	4X4-4Z4 IARC, P O Box 4099, Tel Aviv, Israel
HL9	LCCA, Liga Colombiana de Radio Aficionados, P O Box 584, Bogota, Colombia, South America	TI	Radio Club of Costa Rica, P O Box 2412, San Jose, Costa Rica, Central America	5A	OSL Bureau, Radio Station Rarotonga, Rarotonga, Cook Is., NZART, P O Box 489, Wellington, New Zealand
HM	Pyongyang, North Korea, Asia	TN8	OSL Bureau, P O Box 2239, Brazzaville, Republic of Congo, Africa	5H3	OSL Bureau, P O Box 372, Tripoli, Libya, North Africa
HM	Panama, Republic of Panama, Central America	TU2	ARAI, P O Box 20036, Abidjan, Ivory Coast, Africa	5N2	Dar-Es-Salaam, Tanzania, East Africa
HR1-HR4	Radio Club Tegucigalpa, Box 149-2, Tegucigalpa, DC, Honduras	U	Central Radio Club, P O Box 88, Moscow, Russia, Europe	5R8	Nigerian Amateur Radio Society, P O Box 2873, Lagos, Nigeria, Africa
HR2	QSL Bureau, Radio Club de Honduras, P O Box 273, San Pedro Sula, Cortes, Honduras	VE1	WJ, Fader, VE1FQ, P O Box 663, Halifax, Nova Scotia, Canada	5V	QSL Bureau, P O Box 587, Tananarive, Madagascar, Africa
HR3-HR6	HR3FJ1, Av 14 De Julio, 3 Calle, La Ceiba, Atlantida, Honduras	VE2	J Ravenscroft, VE2NV, 353 Thomcrest Av, Montreal 780, Quebec, Canada	5W1	Via P O Box 33, Atakpame, Togo, West Africa
HR5	HR5NLC, Santa Rosa de Copan, Copan, Honduras	VE3	Russ H Buckley, VE3UW, 20 Almont Road, Downsview, Ontario, Canada	5X5	H E Betham, Director of Post Office & Radio, GPO, Apia, Western Samoa
HS	STAR QSL Bureau, P O Box 2008, c/o GPO, Bangkok, Thailand, Asia	VE4	D E McVittie, VE40X, 647 Academy Road, Winnipeg 9, Manitoba, Canada	524	RSEA QSL Bureau, c/o A H Sanders, P O Box 30035, Kampala, Uganda, East Africa
HV	Domenico Petti, HV1CN, Vatican City, Europe	VE5	VE5JJ, A Lloyd Jones, 2328 Grant Rd, Regina, Saskatchewan, Canada	60	Via P O Box 397, Mogadiscio, Somal Republic, Africa
HZ	Via H23TYQ, Victor L Crawford, P O Box 1721, Aramco, Dhahran, Saudi Arabia, Asia	VE6	K N Tettelaar, VE6AAV, Sub P 0 55, North Edmonton, Alberta, Canada	6W8	REF, or ARAS, P O Box 971, Dakar, Senegal, Africa
I	ARI, V Scarlatti 31, 20124 Milano, Italy	VE7	Henry R Hough, VE7THR, 1291 McKenzie Av, Victoria, British Columbia, Canada	6Y5	Jamaica Amateur Radio Assn, Jamaica Red Cross, 76 Arnold St, Kingston 5, Jamaica, West Indies
JA	JARL, Japanese Amateur Radio League, P O Box 377, Tokyo, Japan, Asia	VE8	George T Kondo, VE8RX, VEB ARRL QSL Bureau, Dept. of Transport, Norman Wells, NWT, Canada	7G1	Nasir H Khan, 9K2AN, Box 736, Kuwait, Asia
JT1	Radio Club JT1KAA, P O Box 639, Ulan Bator, Mongolia	VK1-VK2	WIA QSL Bureau, P O Box 1734, GPO, Sydney, NSW 2001, Australia	7Q1	Central Radio Club, Box 69, Praha 1, Czechoslovakia
JX	All JX stations - address with call letters and name, c/o Jan Mayen, Norwegian Embassy, Reykjavik, Iceland	VK3	Thornbury, Victoria 3071, Australia	7T1	Via B C Makeham, 707AC, P O Box 537, Blantyre, Malawi
KA	FEARLM, CMR Box 1414, APO San Francisco 96525	VK4	OSL Officer, Box 638, GPO, Brisbane 4001, Queensland, Australia	8P6	ARA QSL Service, Box 2, Alger, Algeria, Africa
KC4AA	Office of Antarctic Programs, National Science Foundation, Washington, D.C. 20550, USA	VK5	OSL Bureau, c/o George Luxon, VK5RX, 27 Bolair Rd, Torrens Park, South Australia 5062	8Q4	Radio Society of Barbados, P O Box 814E, Bridgetown, Barbados, Windward Is.
KC4US	c/o Commander, Antarctic Support Activities, FPO New York 09501	VK6	OSL Bureau, c/o J Rumble, VK6GRU, P O Box F319, GPO Perth, West Australia 6001	8R1	Radio Society of Ceylon, P O Box 907, Colombo, Ceylon, Asia
KC6	Caroline Islands cards are sent direct.	VK7	OSL Bureau, Box 371B, GPO, Hobart, Tasmania 7001, Australia	9C1	Cards may be sent direct.
KG4	Base Amateur Radio Office, Box 12, FPO New York 09593	VK8-9-B-SWL	OSL Bureau, c/o R Jones, 23 Landale St, Box Hill, Vic 3128, Australia	9C1	Cards for members only, Ghana Amateur Radio Society, P O Box 3773, Accra, Ghana, Africa
KG6	Mariana Islands, except Guam, send cards direct.	VO1	Ernest Ash, VO1AA, P O Box 6, St. Johns, Newfoundland, Canada	9H1	Robert F Galea, 9H1E, Casa Galea, Railway Road, Birkirkara, Malta, Europe
KH6	Guam only, via P O Box 445, Agana, Guam, Mariana Is.	V02	Goose Bay ARC, P O Box 232, Goose Bay, Labrador, Canada	9I-9J	Via Radio Society of Zambia, P O Box 332, Kitwe, Zambia, Africa
KJ6	John H Oka, KH6QD, P O Box 101, Alea, Oahu, Hawaii 96701	VP2	Antigua - via Gerald Price, VP2AC, P O Box 114, St. Johns, Antigua, Leeward Is.	9K2	Nasir H Khan, 9K2AN, Box 736, Kuwait, Asia
KJ6	DET 1-1957 Compt Group AFCS, KJ6BZ, APO San Francisco 96305	VP2	Dominica - Rev. William B Surbrook, VP2DA, P O Box 64, Roseau, Dominica, Windward Is.	9M2	MARTS, Box 777, Kuala Lumpur, Malaysia, Asia
KL7	Mary Olendorff, KL7BD, Star Rt 1, Wasilla, Alaska 99687	VP2	Grenada - Fred W Pressey, VP2GBL, P O Box 104, Grenada, Windward Is.	9M6-9M8	Via N Yatheendran, 9V1JY, 363 Woodlands Rd, Singapore 23, Asia
KM6	KM6BI, Box 43, FPO San Francisco 96614, USA	VP2	Or MARTS, P O Box 777, Kuala Lumpur, Malaysia, Asia	9Q5	UCAR, QSL Bureau, P O Box 1459, Kinshasa, Rep. of Congo, Africa
KP4	Alicia G Rodriguez, KP4CL	VP2	St. Lucia - via Timothy A James, VP2LT, P O Box 322, Castries, St. Lucia, Windward Is.	9U5	UCAR QSL Bureau, P O Box 3748, Elisabethville, Rep. of the Congo
KP4	P O Box 1061, San Juan, Puerto Rico	VP2	St. Vincent - via QSL Bureau, P O Box 142, St. Vincent, Windward Is.	9V1	SARTS, P O Box 2728, Singapore 1, Asia
KP4	Novice cards only - the NNQB District QSL Manager, KP4QA, Jorge Blanch, Box 2573, San Juan, Puerto Rico	VP7	Bahamas Amateur Radio Society, P O Box 6004, Nassau, Bahama Is.	9X5	RAR QSL Bureau, P O Box 663, Kigali, Rep. of Rwanda

WORLD TIME CONVERSION CHART IN HOURS

0000	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM
0100	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	
0200	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	
0300	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	
0400	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	
0500	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	
0600	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	
0700	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	
0800	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	
0900	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	
1000	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	
1100	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	
1200	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM
1300	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	
1400	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	
1500	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	
1600	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	
1700	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	
1800	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	
1900	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	
2000	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	
2100	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	
2200	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	
2300	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM

With this chart you can convert standard time in any time zone to **GMT** or tell what time it is in other parts of the world. To correctly use this chart visualize each horizontal line as a complete circle. From your time zone tracing horizontally to the right (Counter Clockwise) it will be tomorrow when you pass midnight and yesterday when you pass the international date line. There is no change in date when you pass both midnight and the international date line. For instance at 8 PM in New York Eastern Standard Time it is 2 AM tomorrow in Berlin, Germany and 11 AM tomorrow in Sydney, Australia. Always trace in the shortest direction from your time zone to find what time it is in any other zone.

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<input type="checkbox"/> Door or rig	<input type="checkbox"/> Walnut Grained <input type="checkbox"/> Jet Black	<input type="checkbox"/> All letters same size <input type="checkbox"/> Large letters over small <input type="checkbox"/> Small letters over large	<input type="checkbox"/> 1" x 4" <input type="checkbox"/> 1" x 7" <input type="checkbox"/> 2" x 8"	
<input type="checkbox"/> Exec. Desk Set	<input type="checkbox"/> Walnut Grained <input type="checkbox"/> Jet Black	<input type="checkbox"/> All letters same size <input type="checkbox"/> Large letters over small <input type="checkbox"/> Small letters over large		<input type="checkbox"/> Gold <input type="checkbox"/> Silver
<input type="checkbox"/> Lapel Pin	<input type="checkbox"/> Jet Black <input type="checkbox"/> White <input type="checkbox"/> Red <input type="checkbox"/> Blue			

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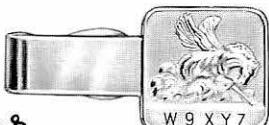


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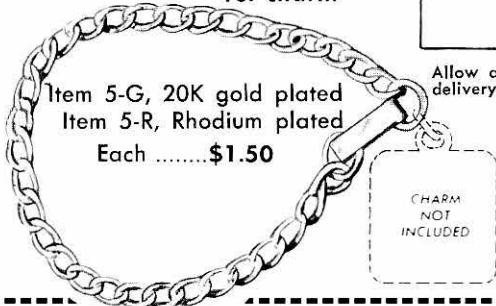


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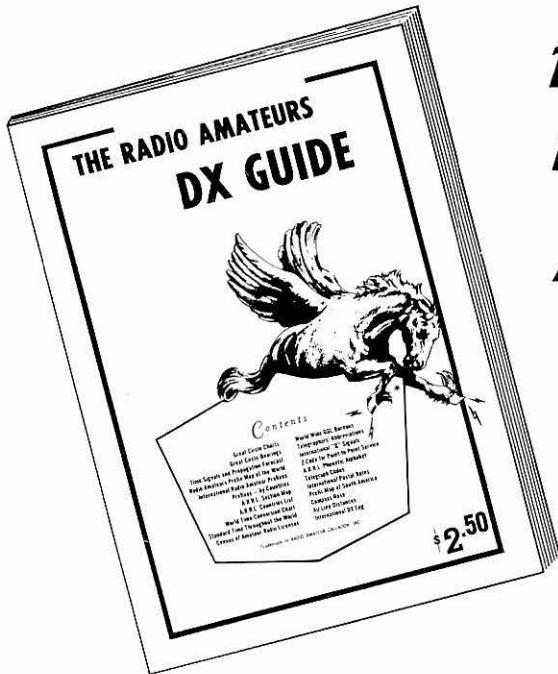
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